NBSIR 73-216

LEAA Police Equipment Survey of 1972
Volume VII: Patrolcars

E. D. Bunten, P. A. Klaus

Technical Analysis Division
Institute for Applied Technology
National Bureau of Standards
Washington, D. C. 20234

Final Report

July 1973

Prepared for
National Institute of Law Enforcement and Criminal Justice
Law Enforcement Assistance Administration
Department of Justice
Washington, D. C. 20530

REPORTS FROM THE LEAA POLICE EQUIPMENT SURVEY:

The present report is one in a series of reports produced from data gathered by the LEAA Police Equipment Survey of 1972. Listed below are the seven reports of that survey.

National Bureau of Standards Report 73-216 (The present report). LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume VII: Patrolcars.

National Bureau of Standards Report 73-210. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume I: The Need for Standards -- Priorities for Police Equipment.

National Bureau of Standards Report 73-211. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume II: Communications Equipment and Supplies.

National Bureau of Standards Report 73-212. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume III: Sirens and Emergency Warning Lights.

National Bureau of Standards Report 73-213. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume IV: Alarm Displays, Security Equipment, and Surveillance Equipment.

National Bureau of Standards Report 73-214. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume V: Handguns and Handgun Ammunition.

National Bureau of Standards Report 73-215. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume VI: Body Armor and Confiscated Weapons.

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NATIONAL BUREAU OF STANDARDS, Richard W. Roberts, Director

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A. Background (pp. 1-2)

- Law Enforcement Standards Laboratory (LESL) was established in 1970 and became part of the NILECJ Equipment Systems Improvement Program (ESIP).
- NILECJ asked the Behavioral Sciences Group of the National Bureau of Standards to develop and carry out a procedure to get information from the users of law enforcement equipment.
- "User" information would aid NILECJ in setting priorities for LESL programs and would provide some detailed information so that research to develop standards could begin.
- In addition, gathering information from the users would help to make police agencies aware of LESL and ESIP.
- A nationwide mail sample survey was selected as the best procedure to collect user information.
- An Equipment Priorities Questionnaire (EPQ) and six Detailed Questionnaires (DQs) were developed and administered. A separate report was prepared for each of these seven questionnaires.

B. Design of Questionnaires (pp. 9-11)

- Questionnaires were developed in conjunction with NILECJ, LESL, and cooperating police departments. Questionnaires were pretested at various times with approximately 45 police departments.
- The EPQ was designed to provide information about priority needs for standards for various types of equipment.
- In addition, the EPQ asked for data about numbers of full- and part-time officers, activities performed in the department, budget, size of jurisdiction, etc.

- The six DQs (Alarms, Security and Surveillance Equipment; Communications Equipment and Supplies; Handguns and Handgun Ammunition; Sirens and Lights; Body Armor and Confiscated Weapons; and Patrolcars) were each developed separately.

- The DQs asked about kinds and quantities of equipment in use, problems with existing equipment, suggestions for improving equipment, needs for standards related to the equipment, etc. Although entitled Detailed Questionnaires, these questionnaires were designed to give an overview of the use of specific items of equipment.

C. Sample (pp. 3-8)

- The population sampled was made up of all police departments listed in a computerized file compiled and maintained by the LEAA Statistical Service.

- Courts, correctional institutions, forensic labs, special police agencies, etc., were excluded.

- The sample was stratified by LEAA Geographic Region (10 Regions) and by Department Type (7 Department Types: State Police; County Police and Sheriffs; City Departments with 1-9 Officers; City Departments with 10-49 Officers; City Departments with 50 or more Officers, excluding the Fifty Largest Cities; the Fifty Largest U.S. Cities by population; and Township Departments).

- Overall, approximately 10% of the 12,836 departments in the population were selected as respondents (see Table 1.2-2).

- The Equipment Priorities Questionnaire was sent to every sample department (1386). Each Detailed Questionnaire was sent to all States, to all of the Fifty Largest Cities, and to a randomly selected subsample of the main sample (about 530 departments received each DQ).

- Thus, States and the Fifty Largest Cities were asked to fill in all seven questionnaires. Each of the remaining 1186 departments were asked to fill in the EPQ and two of the DQs.

- The sample for the Patrolcars DQ consisted of 530 departments (see Table 1.2-3).

D. Questionnaire Administration (pp. 8-9)

- Stringent control of administration was required.
- Introductory letters were sent to heads of departments asking cooperation.
- On June 1, 1972, questionnaire packages were mailed.
- In July 1972, follow-up by self-return postcard was begun.
- In August 1972, follow-up by telephone was begun. Departments which had not returned questionnaires were called. Also, calls were made to clear up ambiguities in the returned questionnaires. About 1300 calls were made. About 70% of the sample departments were called at least once.
- Each questionnaire was edited and coded by a specialized team to ensure consistency; the questionnaires were then keypunched and tabulated.
- Completed questionnaires were accepted for tabulation through January 7, 1973.

E. Rates of Return (pp. 9-10)

- 83% of the 1386 departments returned usable EPQs.
- 85% of the 530 departments returned usable Handguns DQs.
- 81 - 85% of the other DQ subsamples returned usable questionnaires.
- Highest rates of return (over 90%) were from States, the Fifty Largest Cities, and Cities with 50 or more officers.
- Lowest rates of return were from Counties and Townships (less than 75%).

F. Characteristics of Responding Departments (pp. 11-15)

- The activities most commonly carried out by the respondents (to the EPQ) were Serving Traffic and Criminal Warrants (88%), Traffic Safety and Traffic Control (87%), and Intra-departmental Communications (87%).

- All of the responding Fifty Largest Cities said they provided In-House Training and Criminal Investigations. This compared to 68% and 86%, respectively, of all responding departments.

- Only 13% of all respondents had Crime Laboratories. 73% of the Fifty Largest Cities and 55% of the States had Crime Laboratories.

- About three-fifths of the departments in all Department Types were providing Emergency Aid and Rescue, ranging from 60% of the Cities with 50 or More Officers to 67% of the Counties.

- Overall, the reported Equipment Budgets represented somewhat over 10% of the Total Budgets reported.

- Among Department Types there was a wide range of total equipment expenditures, from a mean of about $10,000 for Cities with 1-9 Officers to a mean of almost $2.6 million for the Fifty Largest Cities.

- One of the Fifty Largest Cities reported an Equipment Budget of $40 million.

- Overall, the Fifty Largest Cities reported a mean of 2491 Full-Time Sworn Officers. However, one of the Fifty Largest Cities had 27% of all the Full-Time Officers reported by that Department Type and another had about 12%.

G. Presentation of Data

- Data in this report are presented in two forms: Text tables and full tables (Appendix B). Text tables do not always present a complete break out of the data.

- All tables (text and full) present the data in unweighted form, (i.e., numbers and percentages of the responding departments from the sample for this questionnaire, not figures that have been weighted to expand the data to the total population of police departments in the U.S.)

- The sample selected for this questionnaire was not proportional to the total population of police departments. If decisions are to be made which require estimates of population figures, the appropriate extrapolation
B, page B-1.)

II. SUMMARY OF RESULTS

A. Use of Patrolcars (pp. 23-33)

- More than four-fifths (84%) of patrolcars used by the responding departments were full-sized 4-door models.
- One-tenth (9%) were intermediate-sized 4-door models.
- Only 1% of patrolcars in use were compacts, but 29% of the departments said they would have use for a compact designed for police use.
- Based on the responses, it was estimated that about 160,000 patrolcars were being used by police departments in the United States in 1972.
- More than half (57%) of the responding departments reported that their patrolcars were being used 17-24 hours per day; about one-third said they were being used 9-16 hours, and only 11% said 8 hours or less.
- Four-fifths of large City departments were using patrolcars 17-24 hours a day, but only 17% of Counties and 6% of States were using their cars this long.
- Almost half (45%) of the responding departments reported that each patrolcar had 3 different drivers per day, but two-thirds of State departments and half of Counties had only one driver per car per day.
- State police averaged about 1.5 officers per patrolcar compared to an average of 7.8 officers per car for the Fifty Largest Cities.
- Most (69%) responding departments reported officer shifts of eight hours; but almost two-thirds of States and about half of Counties reported officer shifts of more than eight hours.
- City police departments reported that most of their driving (84%) was at speeds less than 51 mph, with many stops. State police said that about two-thirds (64%) of their driving was at speeds of 50 mph or more.

- More than half of the responding departments rated both the control and handling and the braking of their patrolcars as "excellent" at speeds under 30 mph but only 10% rated these characteristics as "excellent" at 70 mph or more, and more than one-fourth rated these aspects "poor" at over 70 mph.

- Nine-tenths of departments said their patrolcars got less than 12 miles per gallon of gasoline.

- More than half of the responding departments reported routinely carrying in their patrolcars the following equipment items: Clipboard (84%), fire extinguisher (83%), flares (81%), first aid kit (79%), shotgun (73%), batons (67%), blankets (69%), extra ammunition (55%), and brief case (53%).

- State police commonly reported carrying riot equipment (77%) whereas other departments did not (18-28%).

B. Replacement of Patrolcars (pp. 33-55)

- About two-thirds of departments which reported using mileage in determining when to replace patrolcars did not replace cars until they had over 60,000 miles and about one-third replaced them between 40-60,000 miles.

- About two-fifths of departments which reported using age of car in determining when to replace it, replaced their cars every two years. More than one-fourth replaced cars every year and the remaining 31% used their cars 3 years or more before replacement.

- Almost all responding departments (92%) reported that it took officers less than a week to get used to the controls and instruments in a new patrolcar, but only three-fourths (74%) felt it was possible to become accustomed to the handling and performance in this time period.

- Virtually all (98%) of departments reported that they installed a siren and mobile radio when they bought new patrolcars. Three-fourths installed a public address system, 69% flashing lights, 61% spotlights and more than half said they installed gun racks, bubble lights and mounting racks.

- The problems most commonly indicated by departments in making changes in standard automobiles were that there was lack of room for police equipment, the car had to be modified to allow for installation of equipment (which adds to expense) and/or that yearly design changes in cars caused problems.

- Ninety percent or more of responding departments had specified the options of automatic transmission, eight-cylinder engine and power steering when they bought their last patrolcars; more than 80% had specified power brakes, disc brakes and heavy duty suspension; and about 60% had specified air conditioning.

- Almost three-fourths (72%) of the responding departments reported they pay between $3000 and $4000 for a new patrolcar (without trade-in).

- The features of patrolcars felt to be most important by the responding departments were air conditioning, heavy duty suspension, built-in crash bars, barriers between seats, and communications consoles.

C. Maintenance of Patrolcars (pp. 56-63)

- The majority of responding departments (62%) reported an average of less than 3 days of downtime per patrolcar per month and 94% reported five days or less per month.

- About half of State police cited delays in getting parts as a cause of downtime (compared to only one-fourth of the respondents as a whole).

- Large cities most often said that a shortage of mechanics was the main cause of their downtime.

- The brake system and engine were chosen by more than half the responding departments as the areas requiring the most service and repair.

D. Need for Standards (pp. 22-23, 63-66)

- The two systems or aspects of patrolcars most often chosen as needing standards were the braking system and the stability and control of the patrolcar.

- More than three-fourths of departments felt that separate safety standards (different from those for civilian cars) were needed for patrolcars.

- Reasons most often given for favoring separate standards were that patrolcars are subjected to different kinds of use and/or more use than civilian cars and patrolcars are more often used in high speed situations.

- Almost half (48%) of the responding departments listed at least one patrolcar feature they felt to be dangerous to occupants.

1.0 INTRODUCTION

1.1 Project Background

During the past several years, law enforcement agencies in the United States have become more aware of the importance of equipment in the performance of their duties. Much of their equipment had originally been designed for other uses and had to be modified. Other equipment items had to be used as given. No standards existed against which equipment performance could be measured nor were any standard test methods or procedures available. It has been difficult for agencies to compare the performance of equipment items. Recognizing this problem, in 1970, the Law Enforcement Assistance Administration (LEAA) of the Department of Justice began a concentrated program toward the improvement of law enforcement equipment.

As the first step in its Equipment Systems Improvement Program (ESIP), LEAA, in cooperation with the Department of Commerce, established a Law Enforcement Standards Laboratory (LESL) at the National Bureau of Standards (NBS). The broad goal of LESL is to recommend performance standards which can be promulgated by LEAA as voluntary guidelines for the selection of equipment by law enforcement agencies. Additionally, LESL is developing standard test methods and procedures, so that the relative performance of similar items may be evaluated by departments themselves.

In order to provide equipment user information for the ESIP program, in 1971 the National Institute of Law Enforcement and

Criminal Justice (NILECJ) of LEAA asked the Behavioral Sciences Group of the Technical Analysis Division at NBS to gather information from the users of law enforcement equipment about their specialized equipment needs and problems. Although face-to-face interviews with a large sample of representatives from law enforcement agencies would have been desirable, time and manpower constraints led to the development of a nationwide, mail sample survey having two general objectives: (1) To assist NILECJ in the establishment of priorities for LESL's standards development activities; and (2) to obtain detailed information about certain broad equipment categories so that research to develop standards in these areas could begin.

This report fulfills part of the second general objective and the associated survey questionnaire (see Appendix A) will be referred to as the Patrolcars Detailed Questionnaire (DQ). The remainder of the second objective is accomplished in the reports of the other five DQs: Alarms, Security and Surveillance Systems; Communications Equipment and Supplies; Handguns and Handgun Ammunition; Sirens and Emergency Warning Lights; and Body Armor and Confiscated Weapons. The first general objective (above) is accomplished in the report on the Equipment Priorities Questionnaire (EPQ)*. A complete listing of these seven reports may be found on the inside front cover of this report.

* LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume I: The Need for Standards -- Priorities for Police Equipment.

1.2 Sample Design

Although the objective of ESIP is to serve all types of law enforcement agencies, this particular study was purposefully limited to police departments as the largest single group of law enforcement agencies with identifiable equipment needs. No attempt was made to survey correctional institutions, courts, forensic laboratories, or special police agencies such as park police, harbor patrols or university police. The computerized directory of approximately 14,000 police agencies, compiled and maintained by LEAA's Statistics Division, provided the population from which the sample was drawn. Care was taken to exclude the double listings that existed for some agencies. (Details of the selection process are given in Appendix B of the Equipment Priorities Questionnaire.)

The final list of 12,842 departments was cross-stratified by LEAA geographic region and department type by the mutual agreement of NBS and NILECJ. The assignment of states to regions and the seven department types chosen for study are shown in Table 1.2-1.

Table 1.2-1. Stratification Categories

DEPARTMENT TYPES:	LEAA GEOGRAPHIC REGIONS:
State Police	1 = Conn., Maine, Mass., N.H., R.I., Ver.
County Police & Sheriffs	2 = N.J., N.Y.
City with 1-9 Officers	3 = Del, Md., Penn., Va., W. Va., D.C.
City with 10-49 Officers	4 = Ala., Fla., Ga., Ky., Miss., N.C., S.C., Tenn.
City with 50 or more Officers*	5 = Ill., Ind., Mich., Ohio, Wis., Minn.
The 50 Largest U.S. Cities**	6 = Ark., La., N.M., Okla., Tex.
Township Departments	7 = Iowa, Kan., Mo., Neb.
	8 = Colo., Mont., N.D., S.D., Utah, Wyo.
	9 = Ariz., Calif., Nev., Hawaii
	10 = Alas., Idaho, Ore., Wash.

* Excluding the 50 largest U.S. Cities
** By population, U.S. 1970 census

The breakdown of the population of police departments by cross-strata is exhibited in Table 1.2-2. As can be seen from the Table, there were no Townships in Regions 4, 6, 7, 8, 9 and 10. Almost 63% of the departments were city police, 43% having 1-9 full-time officers. County Departments comprised about 24% of the population. By Region, the smallest (Region 10) contained only 3.4% of the police departments, while Region 5, the largest, had 22.5%. The variation in the number of departments in a cell (Region/Department Type combination) was even greater than that across the strata, i.e., the number of departments in each cell ranged from 0 to 1470.

The considerations discussed in the previous paragraph led to the sampling plan discussed briefly below. All of the State

Table 1.2-2 Number of Police Departments by Region and Type

DEPARTMENT TYPE	LEAA REGION 1	2	3	4	5	6	7	8	9	10	TOTAL
State	6	2	5	8	6	5	4	6	4	4	50*
County	66	84	257	764	536	506	413	288	103	120	3137
City (1-9 Officers)	27	348	713	979	1470	703	611	283	135	217	5486
City (10-49 Officers)	40	237	166	344	508	230	142	71	168	79	1985
City (50 or More Officers	60	64	36	83	119	46	23	19	87	17	554
50 Largest Cities	1	4	5	8	10	8	3	1	8	2	50
Township	629	349	362	-	234	-	-	-	-	-	1574
TOTAL	829	1088	1544	2186	2883	1498	1196	668	505	439	12,836

* Questionnaires were actually sent to 56 State Police departments since there were 6 State Departments which listed two police agencies without reference to a common central agency. However, only one set of questionnaires was accepted from each of these 6 agencies as described in Volume I, Appendix B, page B-2.

Departments and the Fifty Largest City Departments were included in the sample and were asked to complete all six DQs, i.e. they were sent the entire package of seven questionnaires. For the remaining cells the variation in cell size presented a problem: If the same fraction of the entire population was to be selected from the members of each cell, a constant sampling fraction large enough to allow a sufficient number of sample units (police departments) in small cells would yield an unmanageably large total sample; on the other hand, a constant sampling fraction small enough to make the total sample manageable would yield too few sample units in small cells. To solve this problem, a fixed sample of 30 police departments/cell was chosen, wherever possible, resulting in a different sampling fraction for each cell. A fixed sample size of thirty departments/cell was chosen to facilitate the equitable distribution of the six DQs. This plan resulted in sending the Partolcars DQ to 536 departments.

The departments were selected randomly within each cell, from the total cell population, each department (other than the States and the Fifty Largest Cities) receiving two DQs. Thus, in cells having 30 sample units, the Patrolcars DQ was mailed to 10 departments; cells having fewer sample units were allocated proportionally fewer Patrolcars DQs. Table 1.2-3 presents the total sample for the Patrolcars DQ by Region and Department Type.

Table 1.2-3. Number of Departments Selected To Receive the Detailed Questionnaire: Patrolcars, by Region and Department Type.

DEPARTMENT TYPE:	LEAA GEOGRAPHIC REGION:											% TOTAL POPULATION
	1	2	3	4	5	6	7	8	9	10	Total	
State	6	2	5	8	6	5	4	6	4	4	50*	100
County	10	10	10	10	10	10	10	10	10	10	100	3
City 1-9 Officers	9	10	10	10	10	10	10	10	10	10	99	2
City 10-49 Officers	10	10	10	10	10	10	10	10	10	10	100	5
City 50+ Officers	10	10	10	10	10	10	8	7	10	6	91	16
50 Largest Cities	1	4	5	8	10	8	3	1	8	2	50	100
Townships**	10	10	10	-	10	-	-	-	-	-	40	3
Total	56	56	60	56	68	53	45	44	52	42	530*	4
PERCENT TOTAL POPULATION	7	5	4	3	2	4	4	7	11	10	4	

* Questionnaires were actually mailed to 56 State police departments since there were 6 states which listed two police agencies without references to a common central agency. However, only one set of questionnaires was accepted from each of these 6 states.

** Township departments exist only in Regions 1, 2, 3, and 5.

Once the sample was selected, each sample unit was assigned a unique seven-digit identification number, coding region, type, and questionnaire assignment.

1.3 Questionnaire Administration

From the beginning of the project, it was evident that stringent control would be required in administering the questionnaires to ensure a high rate of response. Computer-stored daily status records were input via a teletype terminal for each sample department. In general the following procedure was used:

(a) Each department in the sample was mailed a letter, signed by the director of NILECJ, addressed to the head of the department. This letter introduced the survey and requested cooperation.

(b) About one week later, the questionnaire packages were mailed.

(c) Departments not returning the questionnaires within a month were identified by the computer and were sent a self return postcard requesting information as to the status of the questionnaires. Departments not receiving the questionnaire package were sent another; those not returning the postcard were placed on a list for telephone follow-up.

(d) About a month and a half later, departments with which no contact had been made were called by telephone.

(e) Returned questionnaires were reviewed for completeness

and either coded for keypunching or filed for telephone call-back to supply missing data or to resolve ambiguities.

Considerable effort was expended to ensure a high rate of response, and this effort was rewarded with an 85% response for the Patrolcars DQ, and between 80% and 85% for each of the other questionnaires. In the course of the survey more than 70% of the sample departments were contacted at least once by telephone. More than 1300 phone calls were made by the survey team.

The distribution of respondents (departments which returned usable Patrolcars DQs) is exhibited in Table 1.3-1. The highest percentages of response were from the larger Cities and States, (over 90%), while Counties and Townships had the poorest response rates (under 75%).

1.4 Development and Design of the Patrolcars DQ

The survey plan and questionnaire design (of all seven questionnaires) evolved over a 12-month period. During this time, the survey team consulted at length with NILECJ equipment experts, LESL program managers, and equipment manufacturers. In addition, the officers and administrators of about 40 police departments served as consultants and/or as respondents for pretests of various versions of the questionnaires.

The Patrolcars DQ, in its final form, is reproduced in Appendix A. This DQ asked respondents to describe their general use of patrolcars, their purchasing practices, the types of options and accessories they usually select, the types of equipment

Table 1.3-1. Number of Sample of Departments Returning Acceptable Detailed Questionnaires: Patrolcars

DEPARTMENT TYPE:	LEAA GEOGRAPHIC REGION:											% TOTAL SAMPLE
	1	2	3	4	5	6	7	8	9	10	Total	
State*	6	2	5	8	6	5	3	6	3	3	47	94
County	4	6	6	6	8	7	9	9	10	7	72	72
City 1-9 Officers	8	10	10	10	8	6	10	7	7	6	82	83
City 10-49 Officers	9	9	8	8	10	8	9	10	9	10	90	90
City 50+ Officers	9	7	9	9	9	10	8	7	9	6	83	91
50 Largest Cities	1	3	4	7	9	8	3	1	8	2	46	92
Townships**	5	10	8	-	6	-	-	-	-	-	29	73
Total	42	47	50	48	56	44	42	40	46	34	449	85
PERCENT TOTAL SAMPLE	75	84	83	86	86	83	93	91	88	81	85	

* Questionnaires were actually mailed to 56 State police departments since there were 6 states which listed two police agencies without references to a common central agency. However, only one set of questionnaires was accepted from each of these 6 states.

** Township departments exist only in Regions 1, 2, 3, and 5.

they store in their patrolcars and their need for standards. The questionnaire was limited to general topics because: (1) It was not possible, considering the scope of the present survey, to explore in a detailed manner all of the complex components, accessories and systems normally found in these vehicles, and (2) it was felt that the general data gathered in the present effort would provide important direction for research in the development of standards, the main objective of the survey.

1.5 Characteristics of Subsample Groups

The EPQ of the LEAA Police Equipment Survey* requested data from each department about population served, physical size of jurisdiction served, type of jurisdiction, number of full- and part-time officers, approximate total, equipment, and personnel budgets during 1971, and activities handled by the department.

Table 1.5-1 presents a partial tabulation, by department type, of the responses to a check list of 30 typical police activities by the respondents to the EPQ. (The EPQ respondents include, but are not limited to, the respondents to the Patrolcars DQ. See Section 1.2.) The activities most frequently checked by all departments were: (1) Serve Traffic and Criminal Warrants (88%), (2) Traffic Safety and Traffic Control (87%), and (3) Communications for Own Department (87%). The activity with the most consistent level across all department types was that of

* LEAA POLICE EQUIPMENT SURVEY OF 1972, Op. cit.

Table 1.5-1. Activities Handled by AT LEAST ONE-THIRD of That Department Type by Department Type, and Percent of Total Departments Having Each Activity

DESCRIPTION OF ACTIVITY:	State %	County %	City 1-9 %	City 10-49 %	City 50+ %	50 Largest %	Township %	Total %
Serve Traffic and Criminal Warrants	70	89	84	89	94	87	93	88
Traffic Safety and Traffic Control	92	56	94	96	96	98	94	87
Communications for Own Department	94	86	76	95	94	96	70	87
Criminal Investigation	66	86	71	95	97	100	79	86
Police Training for Own Department	98	55	48	77	87	100	42	68
Custody/Detention-Less than 1 Day	-	79	51	73	72	80	43	65
Breath-Alcohol Test	89	46	47	72	83	91	49	64
Emergency Aid and Rescue	62	67	62	63	60	67	62	63
Public Building Protection	-	40	63	60	58	44	68	54
Service Function	-	-	48	55	60	60	42	48
Animal Control (Dog Catcher)	-	-	58	63	42	-	37	44
Highway Patrol	96	38	48	36	-	-	88	43
Maintenance of Police Buildings	51	36	34	41	48	47		40
Custody/Detention-1 Week or Less	-	73		36	46	49		38
Communications for Other Agency	66	56		40	-	-		36
Serve Civil Process	-	88			-	-		32
Police Training for Other Agency	77	-			42	84		24
Custody/Detention-Up to 1 Year	-	78			-	-		22
Underwater Recovery	34	42			-	42		19
Bomb Disposal	45				-	82		17
Polygraph	62				36	90		17
Vehicle Inspection	55					-		17
Crime Laboratory	55					73		13
Narcotics Laboratory Analysis	43					62		11
Harbor Patrol	-					-		7
Lab Analysis for Blood Alcohol	34					53		7
Other	-							6
Coroner	-							5
Tests for Drivers License	34							3
Custody/Detention-More than 1 Year								3

Emergency Aid and Rescue, ranging from 60% (Cities with 50+ Officers) to 67% (Counties).

Higher percentages of State and Fifty Largest City departments than of other Department Types were handling certain of the 30 activities. For example, all of the Fifty Largest City departments responding and 98% of the responding State departments said that their departments provided Police Training for Own Department. These compare to 68% for all responding departments. All of the responding Fifty Largest Cities said that they handled Criminal Investigation in their own departments. This compares to 86% of the total sample of departments. Although only 13% of the departments overall had Crime Laboratories, 73% of the Fifty Largest Cities and 55% of the States had them.

Counties appeared to be the only Department Type with significant responsibilities for custody and detention for more than 1 week. Seventy-eight percent of these departments had Custody/Detention--Up to 1 Year, as compared with 22% of the total sample.

Tables 1.5-2 and 1.5-3 present summaries of descriptive data by Department Type and LEAA Region, respectively. As can be seen from the column for Annual Equipment Budget (Table 1.5-2), there was a wide range of expenditures among different Department Types: From a mean of about 10 thousand dollars for responding Cities (1-9) to almost 2.5 million dollars for the Fifty Largest Cities. Overall, equipment budgets represented somewhat over 10% of the Annual Total Budget.

Table 1.5-2. Descriptive Data by Department Type (Means)

Department Type	Area (Sq. Miles)	Population	Number of Full-Time Officers	Number of Part-Time Officers	Annual Total Budget	Annual Equipment Budget	Annual Personnel Budget
50 Largest	187	851342	2491	1115	$43,268,865	$2,669,920	$34,712,818
State	62580	3936410	889	18	$16,377,358	$2,304,339	$12,020,572
County	1518	130254	60	25	$ 1,089,919	$ 58,539	$ 859,984
City (50+)	31	83344	132	26	$ 1,733,340	$ 173,099	$ 1,407,177
City (10-49)	12	15849	22	9	$ 257,927	$ 24,362	$ 206,187
Township	28	13228	14	8	$ 175,654	$ 20,854	$ 141,675
City (1-9)	9	5038	8	5	$ 82,381	$ 9,764	$ 60,061

Table 1.5-3. Descriptive Data by LEAA Region (Means)

LEAA Region	Area (Sq. Miles)	Population	Number of Full-Time Officers	Number of Part-Time Officers	Annual Total Budget	Annual Equipment Budget	Annual Personnel Budget
1	750	158112	96	18	$ 1,360,155	$ 135,130	$ 979,911
2	648	240781	365	97	$ 7,148,315	$ 148,172	$5,265,546
3	1096	245733	216	7	$ 3,412,567	$ 435,153	$2,879,293
4	3691	340996	151	11	$ 2,318,382	$ 248,600	$1,767,292
5	2652	448174	283	8	$ 4,916,607	$ 431,478	$3,879,374
6	5738	271386	160	17	$ 2,193,823	$ 160,363	$1,709,910
7	2379	112094	84	9	$ 1,220,385	$ 121,001	$ 983,696
8	6346	83023	54	9	$ 728,549	$ 77,081	$ 568,463
9	4218	372094	281	46	$ 5,743,553	$ 728,801	$4,528,692
10	3580	104877	69	9	$ 1,253,894	$ 82,198	$1,011,604

The mean Number of Part-time Officers was based on those respondents having part-time officers in their departments. Of the 45 responding from the Fifty Largest Cities, only six had part-time officers, including one city which had nearly 6000. Thus, the mean value of 1115 for this department type is somewhat misleading. It should be noted that the category Part-time Officers included officers described as auxiliary, volunteer, reserve, school-crossing guard, dispatcher, summer, special agent, traffic supervisor, posse, and cadet. All of these classifications were counted in the Part-time Officer category since it has different meanings for different departments.

Variations in these descriptive averages by LEAA region (Table 1.5-3) were considerably smaller than variations by department type. Regions 1 and 8 had smaller budgets than the others, primarily because each had only one of the Fifty Largest Cities.

2.0 QUESTION BY QUESTION DISCUSSION

2.1 Advice to the Reader

In reading Section 2, certain points should be kept in mind:

(a) THIS REPORT IS NOT AN EVALUATION OF ANY OF THE EQUIPMENT DESCRIBED OR DISCUSSED WITHIN IT. IT IS A PRESENTATION OF INFORMATION AND OPINIONS OF A STRATIFIED RANDOM SAMPLE OF POLICE DEPARTMENTS GIVEN IN RESPONSE TO A SPECIFIC SET OF QUESTIONS. IT DOES NOT, IN ANY WAY, REFLECT OBJECTIVE TEST

ING OF ANY EQUIPMENT BY THE NATIONAL BUREAU OF STANDARDS.

(b) The report reflects only what police departments were willing and able to say in response to a specific set of questions. In most cases, no attempt was made to verify the accuracy of the information given or the level of sophistication of the respondent.

(c) Each discussion begins with the presentation of the question that appeared in the questionnaire, and in most cases the choices supplied, if any, set off in a box. However, the reader is cautioned to become familiar with the questionnaire sent to sample departments (See Appendix A) and to evaluate the data in terms of the exact questions asked.

(d) The text tables that appear in Section 2 are almost never the complete tables that were tabulated for that question. Data categories for text tables may have been collapsed from the full table, or certain categories of interest may have been singled out for fuller discussion. Appendix B contains the complete tables from which the text tables were extracted. Text tables have been numbered after the question number (e.g., the text tables for question 6A. would be numbered

6A-1, 6A-2, etc.) The tables in Appendix B are also numbered after the question number, in the same manner. In some cases, tables that appear in Appendix B will not have been discussed at all in the text.

(e) Data in the text of this report are usually presented by nearest whole percent of the group under consideration. In Appendix B, the data are usually presented by number of respondents and percent. Because of statistical limitations imposed by the sample sizes used in this study, the reader is cautioned to be wary of assigning importance to percentage differences of less than 5% when percentages are based on the total respondents, and to percentage differences of less than 10% when percentages are based on one of the subsample groups, (e.g., a particular Department Type or Region). No statistical tests of significance are reported.

(f) Data were always tabulated by each of the choices supplied, if any, in the questionnaire. Any "other" choices written in by the respondents were also tabulated and/or recorded verbatim. In most cases, the numbers of respondents giving a specific "other" response do not reflect the numbers of

respondents who would have marked that choice if it had been one of those provided. Therefore, in most cases, this report lists or gives examples of "other" responses, but does not present numbers or percents of departments giving that response. For those questions for which choices were not provided in the questionnaire, coding categories were developed after approximately one-fourth of the questionnaires had been returned.

(g) The subsample groups (Department Types and Regions) are capitalized when they are discussed in the text. In addition, the four Department Types which are composed of city departments are at times discussed as a group. In those cases, the word "city" is also capitalized. The following convention has been adopted in the report to designate the four City Department Types:

City with 1-9 Officers = City (1-9)

City with 10-49 Officers = City (10-49)

City with 50 or More Officers = City (50+)

The Fifty Largest Cities = Fifty Largest

In table headings this same convention has been used except that the parentheses have been removed, and the Fifty Largest Cities are designated "50 Largest".

When the subsample groups are discussed (e.g., "Counties said..." or "Cities (1-9) said ...") the reference is to the responding departments from one of the sample strata. It is particularly important to note that when the text or tables refer to "All Departments" or "All Responding Departments," the reference is to all responding departments from the sample described in Section 1.2. This sample was not proportional to the total population of police departments, and although it is possible to do so, the data in this report have not been weighted to allow direct extrapolation to the total population. (See Appendix B. page B-1.)

2.2 Discussion

2.2.1 Characteristics of Respondents

TITLE OF RESPONDENT

All of the questionnaires in the LEAA Police Equipment Survey were mailed to the Chief (or highest official) of the department with a request that the questionnaires be directed to the person or persons within the department who were best qualified to answer the questions.

In general, the Patrolcars DQ was filled by officers with high rank. In 63% of the smallest City departments, the questionnaire was completed by the Chief of the department; in Township departments, 52% were filled in by the Chief; and in Cities (10-49), 49% of the Patrolcars Questionnaires were

filled in by the Chief. As the size of the City Department Type increased, the percentage of Chiefs completing this questionnaire decreased. In the larger Cities, greater percentages of respondents were Captains and Lieutenants.

Table i. Title of Respondent to Patrolcars DQ by City Types and Township.

TITLE OF RESPONDENT:	DEPARTMENT TYPE:				
	% City 1-9	% City 10-49	% City 50+	% 50 Largest	% Township
Chief	63	49	22	4	52
Captain	2	4	29	15	7
Lieutenant	2	12	18	24	7
Sergeant	7	18	11	13	17
"Non Rank" Title	13	4	6	26	3
TOTAL	87	87	86	82	86

In County and State departments too, relatively high ranking officers filled in the Patrolcars Questionnaire: In 47% of the State departments the questionnaire was completed by either a Captain or a Lieutenant; in 63% of the County departments the form was answered by the Sheriff or Deputy Sheriff.

In about one-fourth of the State (23%) and Fifty Largest City (26%) departments the questionnaire was completed by a person with some title that was not a police rank. Usually these persons were fleet personnel or other civilians in charge of patrolcar maintenance or purchase.

NUMBER OF YEARS OF LAW ENFORCEMENT EXPERIENCE OF RESPONDENT

In general, the respondents to the Patrolcars questionnaire had been in law enforcement work for several years when

they answered the questionnaire. In 51% of the 449 responding departments the responding officer had more than 15 years of experience in law enforcement. Eighty-four percent of the total had 6 or more years of experience. Only 5% of all respondents had less than 3 years of such experience. (In the questionnaire, space was provided for the person who filled in the questionnaire and for two persons who may have helped fill in the questionnaire. Only the information from the primary respondent was included in the tabulation.)

More than 48% of the respondents from every Department Type had more than 10 years of experience in law enforcement. State departments and the two groups of largest City departments had the highest percentages of respondents with lengthy police service.

Table ii. Number of Years of Law Enforcement Experience of Respondents to the Patrolcars DQ, by Department Type.

NUMBER OF YEARS OF LAW ENFORCEMENT EXPERIENCE:	DEPARTMENT TYPE:						
	% State	% County	% City 1-9	% City 10-49	% City 50+	% 50 Largest	% Township
	CUMULATIVE PERCENTAGES						
More than 10 years	82	59	48	75	80	84	57
More than 20 years	42	19	18	30	43	45	16
More than 25 years	21	11	11	16	13	17	13

2.2.2 Need for Patrolcar Standards

1. What two general systems or aspects of the patrolcars used by your department need standards most? (MARK X BY 2 OF THE FOLLOWING)

Cooling system	Stability and control
Braking system	Collision capacity
Transmission system	Ride and comfort
Suspension system	Convenience of equipment & controls
Restraint system	Engine
	Other (Specify)

Each department had a chance to "vote" twice in reply to this question. In the few cases in which a department marked three choices, all three were counted because there was no way to distinguish the first two.

Across all respondents, Braking System and Stability and Control were chosen by about 1/3 of the departments (36% and 33% respectively). The other patrolcar systems that were said to be in need of standards by at least 20% of all respondents were Engine (24%), Convenience of Equipment and Controls (22%), and Cooling System (21%). These five "most chosen" systems/ aspects are presented below by department type.

Table 1. Aspects of Systems of Patrolcars Said to Need Standards Most, by Department Type.

ASPECT:	DEPARTMENT TYPE:							
	% All Depts.	% City 10-49	% State	% 50 Largest	% Town-ship	% City 1-9	% City 50+	% County
Braking System	36	43	40	39	34	33	33	32
Stability & Control	33	29	38	35	41	33	28	35
Engine	24	28	26	9	21	29	24	25
Equipment/ Control Convenience	22	27	17	15	31	32	13	17
Cooling System	21	18	32	24	10	21	14	28

The most interesting aspect of the Department Type breakdown was the relative consistency among the Seven Department Types in the systems they selected as needing standards most. This consistency was striking because, as will become apparent in the following discussion, there was a great deal of difference in the ways the different Department Types used their patrolcars and in the options and modifications they required to transform a regular automobile into a patrolcar.

2.2.3 Numbers and Types of Patrolcars

2.A. How many of the following types of patrolcars do you now have in your department?

Full size 2-door	Intermediate size 4-door
Full size 4-door	Station Wagon
Intermediate size 2-door	Compact

In the questionnaire, examples were given of each of the size designations listed above. When respondents listed both

marked and unmarked patrolcars, both were counted. It is possible that some departments did not include unmarked cars in their answers. Since the question asked specifically for numbers of patrolcars, most departments were assumed to have excluded auxiliary police vehicles not used for patrol purposes.

The great majority (84%) of all patrolcars currently in use by responding departments were Full Size 4-door models. About 9% of the total were Intermediate Size 4-door models which were used relatively more by Counties than any other Department Type. Only 1% were Compacts.

Table 2A-1. Proportions of Full Size 4-Door and Intermediate Size 4-Door Patrolcars, by Department Type.

MODEL:	DEPARTMENT TYPE:						
	% State	% County	% City 1-9	% City 10-49	% City 50+	% 50 Largest	% Township
Full size 4-door	88	53	80	83	72	81	84
Intermediate 4-door	3	35	7	7	18	15	10

A total of 46,562 patrolcars was reported by the 449 responding departments -- an average of 104 patrolcars per department (excluding 4 departments which gave no answer). This average is a misleading one, as will be shown below, since the 47 State department responses accounted for more than half (27,403) of the patrolcars reported by the total respondents; and the 46 Fifty Largest Cities departments accounted for an additional 31% (14,541) of the patrolcars reported.

Table 2A-2. Average Number of Patrolcars Per Department Type.

DEPARTMENT TYPE:	Total No. Departments Responding	Total No. Patrolcars Reported	Mean No. Patrolcars Per Dept.
State	47	27,403	583
County	72	1,579	23
City (1-9)	82	161	2
City (10-49)	90	460	5
City (50+)	83	2,379	29
50 Largest	46	14,415	321
Township	29	129	4

The mean number of patrolcars within each Department Type varied generally with the size of the department as indicated by numbers of full-time sworn officers* with one exception: State police departments had many fewer officers per patrolcar than any other department type.

Table 2A-3. Mean Number of Officers Per Patrolcar, by Department Type.

DEPARTMENT TYPE:	Mean No. Patrolcars Per Dept.	Mean No. Officers Per Dept.*	Mean No. Officers/Patrolcars Per Dept. Type
State	583	889	1.5
County	23	60	2.6
City (1-9)	2	8	4.0
City (10-49)	5	22	4.4
City (50+)	29	132	4.6
50 Largest	321	2491	7.8
Township	4	14	3.5

* Data for average number of full-time sworn officers per department type were drawn from the Equipment Priorities Questionnaire of the LEAA Police Equipment Survey.

Using these averages, it appears that State police departments had approximately one patrolcar for every 1.5 officers. In contrast, the Fifty Largest Cities had approximately one patrolcar for every 8 officers. The ratios for the other Department Types fall between these two figures.

Using the figures discussed above, it was possible to estimate the total number of patrolcars that were in use during 1972. If the mean number of patrolcars reported by each Department Type is multiplied by the total population of departments of that type, the sum of these subtotals is an estimate of patrolcars in use by all departments in the U.S.

Table 2A-4. Estimated Total Population of Patrolcars in the U.S., by Department Type.

DEPARTMENT TYPE:	Mean No. Patrolcars Per Dept.	No. Depts. That Type in Total Population	Estimated Number of Patrolcars in Total Population
State	583	50	29,150
County	23	3137	70,896
City (1-9)	2	5486	10,897
City 10-49)	5	1985	10,123
City (50+)	29	554	15,900
50 Largest	321	50	16,055
Township	4	1574	6,296
ESTIMATED TOTAL U.S. PATROLCARS			159,317

This estimate of approximately 160,000 patrolcars in use in the United States should probably be considered a minimum estimate. The calculations were based on the total number of departments listed in LEAA's computer file. The LEAA Statistics Division has estimated that between five and ten thousand more small, part-time departments may exist that were not listed on the LEAA tape.

2B. Would it be of any use to your department to be able to buy standard compact (or smaller) cars that were specially designed for police use?

Why, or Why not?

Table 2B-1. Number and Percent of Departments With Use for A Compact Patrolcar.

DEPARTMENT TYPE:	USE FOR COMPACT DESIGNED FOR POLICE USE?: %Yes	%No	%No Answer/Don't Know
City (50+)	39	59	2
City (1-9)	35	65	0
City (10-49)	31	68	1
50 Largest	28	72	0
Townships	28	72	0
Counties	22	76	1
States	13	85	2
All Dept. Types	29	69	1

Although compacts made up only 1% of patrolcars being used by responding departments, more than one-quarter (29%) of the departments said they would have use for a compact or smaller patrolcar. State departments less often expressed a need for compacts than did other Department Types.

2B. (IF "YES") Why?

Forty-five percent of the departments which said that compact patrolcars would be useful for police work gave Economy as their reason (e.g., they would cost less, get better gas mileage, have cheaper maintenance, etc.) and 23% said that compacts would be useful for special purposes (e.g., for detectives, for the chief's car, for stake-outs, etc.).

Table 2B-2. Reasons Why Departments Would Use Compact (Or Smaller) Patrolcars Specially Designed for Police Use.

Percent Of The 132 Departments Who Said "Yes" To The Need For Compact Patrolcars*:	
45%	Economy
23	For special purpose use
17	Handling/maneuverability
12	Not need big engine/car
8	Refer to design, not size
6	Comment/caveat, not reason
6	Other
10	No Answer

* Respondents could give two reasons, percentages add to more than 100%.

2B. (IF "NO") Why not?

The majority of the 449 respondents (312 or 69%) said that they did not think it would be of any use to their departments to be able to buy standard compact or smaller cars that were specially designed for police use. Most of the reasons for saying "no" related to the belief that compacts would be generally too small for police needs: Too Small for Officer Comfort and/or Convenience (20%), Too Small for Prisoner and/or Passenger Transport (16%), Too Small for Necessary Equipment (8%), and Too Small or Too Light in General (11%). Another fairly large group of respondents said they thought compacts would be unsuitable as patrolcars because they thought current models did not perform as well (16%), were not as safe (8%), and were not as durable (8%) as larger cars. Objections such as these might not necessarily be relevant if the car were, in fact, specially designed to be a patrolcar.

Table 2B-3. Reasons Why Departments Would Not Use Compact (Or Smaller) Patrolcars Specially Designed for Police Use.

Percent of the 312 Departments Who Said "No" To The Need For Compact Patrolcars*:	
20%	Too small for officer comfort/convenience
16	Too small for passenger/prisoner transport
16	Roadability, stability, performance
12	Satisfied with present car
11	Too small/light in general
8	Too small for necessary equipment
8	Not suitable for all purpose use
8	Not as durable as larger car
8	Not as safe as larger car
8	Other

* Respondents could give two reasons, percentages add to more than 100%.

2.2.4 Use of Patrolcars

3. On the average, about how many hours is one of your patrolcars in use during a typical day?

Under 4 hours
4-8 hours
9-16 hours
17-24 hours

There was great variation in the average number of hours of daily patrolcar use among the seven Department Types. In general, City departments of medium size and larger (10 or more officers) had the highest average daily use of patrolcars.

Table 3. Average Daily Patrolcar Use by Department Types.

DEPARTMENT TYPE:	AVERAGE DAILY HOURS OF PATROLCAR USE:			
	17-24 Hours % Depts.	9-16 Hours % Depts.	4-8 Hours % Depts.	Under 4 Hours % Depts.
50 Largest	80	20	0	0
City (50+)	80	19	0	0
City (10-49)	79	18	3	0
City (1-9)	62	30	2	5
Township	52	34	14	0
County	17	47	29	7
State	6	68	26	0

Only a few of the smallest and medium sized Cities had patrolcars in use less than nine hours per day, and about 80% of all large City departments (with ten or more officers) said their patrolcars were in use 17 or more hours per day.

State departments and Counties reported lower average daily use of patrolcars than did Cities. More than one-fourth of the State and County departments reported that, on the average, a patrolcar in their departments was in use only 4-8 hours per day.

The small percentage of State departments (6%) reporting patrolcars in use for more than 16 hours a day as compared to departments in the larger Cities (80%) appears to be directly related to the answers to Q. 2A: State departments averaged about one patrolcar for each 1.5 full-time sworn officers while the Fifty Largest Cities had an average of one patrolcar for each eight officers.

4. On the average, how many different officers drive one patrolcar in a day?

One
Two
Three
More than three

Larger City departments tended to have more different drivers per patrolcar per day than did smaller City departments; and City departments, in general, reported more drivers per car than either State or County departments. For example, 66% of the State departments reported only one driver per car per day, while 93% of the Fifty Largest Cities said that each patrolcar had three or more different drivers each day. The differences between the State and County departments and the City departments in this aspect of patrolcar usage is again consistent with the general differences in patrolcar utilization reported in questions 2A. and 3.

Table 4. Number of Drivers Per Patrolcar Per Day, by Department Type.

DEPARTMENT TYPE:	AVERAGE NUMBER DIFFERENT DRIVERS EACH DAY:			
	One	Two	Three	More Than Three
	% Depts.	% Depts.	% Depts.	% Depts.
State	66	28	4	2
County	51	25	18	7
City (1-9)	12	20	45	23
Township	10	17	55	14
50 Largest	4	2	52	41
City (50+)	1	10	64	27
City (10-49)	0	4	61	34

5. How long is an officer's shift in your department?

Under 4 hours
4-8 hours
9-12 hours
Over 12 hours

Although most departments reported an officer's shift to be 4-8 hours, one-fourth of the departments reported a shift of 9-12 hours. State police (64%) and County police departments (53%) most often had officers working shifts of more than 8 hours.

Table 5. Length of Officers' Shifts, by Department Type.

DEPARTMENT TYPE:	LENGTH OF OFFICER SHIFT:		
	4-8 Hours % Depts.	9-12 Hours % Depts.	12+ Hours % Depts.
City (10-49)	91	9	0
City (50+)	86	14	0
50 Largest	78	20	0
Townships	72	14	10
City (1-9)	61	34	4
County	46	31	22
State	36	62	2

Comparing these responses to question 3 (About how many hours is one of your patrolcars in use during a typical day?) it appears that most State departments were using a patrolcar for one shift only and that larger City departments were using a patrolcar for at least three shifts.

6. What determines when your patrolcars are replaced?

Mileage? (If "yes", What mileage?)
Years of use? (If "yes", How many years?)
Other? (If "yes", Please specify.)

Departments were asked to indicate whether their patrolcars were replaced on the basis of the number of miles on the car, the age of the car, or other factors. About half (51%) of the respondents said that patrolcar replacement was based on only one of these three factors, and the other half selected some combination of the three. About two-thirds (64%) selected the age of the car (alone, or in combination with other factors) and almost two-thirds (61%) selected Mileage (alone, or in combination) as a criterion for deciding when to replace the car. About one-third of the sample indicated other criteria (in addition to, or instead of, mileage or age) such as: General Condition of the car, Budget/Administrative Policy, the fact that repair costs had become too high, or the fact that the car had been in a Major Accident.

Table 6-1. Mileage and Years of Use as Criteria For Patrolcar Replacement, by Department Type.

DEPARTMENT TYPE:	MILEAGE:		YEARS OF USE:	
	% Depts. Using Mileage (In combination with other factors)	% Depts. Using ONLY Mileage On Car	% Depts. Using Years (IN combination with other factors)	% Depts. Using ONLY Years of Use
State	94	36	47	6
50 Largest	74	9	63	9
County	68	17	65	14
City (10-49)	58	27	62	32
City (50+)	55	18	58	27
Townships	52	10	62	24
City (1-9)	39	6	80	40
All Dept. Types	43	18	40	24

Almost all State police (94%) used mileage (alone, or in combination with other factors) in determining when a car was to be replaced. Small City departments (less than 10 officers) most often reported that they considered the number of years the car had been in use when making their decision.

Table 6-2. Of Those Which Used Mileage in Replacement Decisions (61% Total, n=272) Percentages Replacing Patrolcars At Each Mileage Level, by Department Type.

DEPARTMENT TYPE:	% That Dept. Type Saying 40,001-60,000 Miles	% That Dept. Type Saying Over 60,000 Miles
City (50+) (n=46)	43	57
City (10-49) (n=52)	42	52
City (1-9) (n=32)	37	59
State (n=44)	36	64
50 Largest (n=34)	26	71
Townships (n=15)	13	73
County (n=49)	12	84
All Departments (n=272)	32	65

Of those departments using Mileage as one of the criteria for patrolcar replacement, about two-thirds replaced the cars when they had Over 60,000 miles and about one-third replaced them when they had between 40,000-60,000 miles. Few departments replaced cars with less than 40,000 miles.

Of those departments (64% of the respondents) which used the Age of the car as one of the criteria for determining patrolcar replacement, 40% replaced their cars every two years. States, Counties and departments in the Fifty Largest Cities more often reported using their cars for 3 years before replacement than did other Department Types.

Table 6-3. Of Those Which Used Age in Replacement Decisions (64% Total, n=286) Percentages Replacing Patrolcars at Each Age Level, by Department Type.

DEPARTMENT TYPE:	NUMBER OF YEARS TO REPLACEMENT:		
	1 Year	2 Years	3 Years Or More
	% Dept. Type	% Dept. Type	% Dept. Type
City (10-49)	54	39	7
Township	44	39	17
City (50+)	35	46	14
City (1-9)	24	39	37
50 Largest	10	38	50
State	5	45	50
County	4	36	55
All Departments	27	40	31

7. About what percent of all the miles driven by all the patrolcars in use in your department is at each of the following speeds?

25-30 miles/hour with many stops	50-70 miles/hour
30-50 miles/hour with many stops	Over 70 miles/hour
35-50 miles/hour with few stops	Other (please specify)

This question was designed to elicit approximate percentages from each department for each of the speed/type responses provided. Average percentages for each Department Type were calculated from these answers. Nine percent of the 449 respondents placed an "X" in one of the spaces rather than a percentage. Telephone calls were made to about half of these "indefinite" respondents, and it was determined from these calls that almost all of these respondents were indicating "100%" by marking a single response. In the tables, these 41 responses were counted as "100%" to the choice marked.

Table 7. Mean Percentages of Total Driving Time Expended in Each Speed/Type Category, by Department Type.

SPEED/TYPE:	MEAN PERCENTAGE OF THE TOTAL DRIVING DONE IN THAT DEPARTMENT TYPE:						
	% City 50+	% City 1-9	% City 10-49	% 50 Lgst.	% Town-ship	% County	% State
25-30 mph, many stops	63	59	59	54	23	13	4
30-50 mph, many stops	26	25	22	28	41	22	10
35-50 mph, few stops	6	6	8	8	25	19	22
50-70 mph	4	5	6	6	8	37	51
Over 70 mph	1	2	2	2	2	7	13

The responses of the City Departments to this question were very similar to one another and were different from the responses of State, County and Township departments. The mean percentages for all 301 City departments showed that 84% of the driving by City departments was at speeds less than 50 mph with Many Stops (59% at 25-30 mph and 25% at 30-50 mph). Little driving was done by City departments at the higher speeds (5% at 50-60 mph; 2% over 70 mph) or in areas where it was possible to travel without frequent stopping (8% at 35-50 mph with Few Stops).

State departments reported most of their driving to be at high speeds and to have Few Stops. State departments said that about 64% of all their driving was at speeds of 50 mph or more. The mean percentages compiled for County departments were more evenly distributed among the five speed ranges than those for any other Department Type. About 35% of all County driving was said to be at speeds of 25-50 mph with Many Stops; about 19% was 35-50 mph with Few Stops, and about 37% was at speeds of 50-70 mph.

The mean percentages for Township departments showed that most of their driving occurred at speeds between 25 and 50 miles per hour (89%). A small number of departments (n=15, 4%) reported "other" kinds of driving. Most of these responses were "idling" or "less than 25 mph".

8A & B. Please tell us how well your patrolcars usually perform with regard to (A) Control and Handling, and (B) Braking at each of the following speeds.

Under 30 Miles per Hour
30 to 70 Miles per Hour
Over 70 Miles per Hour

The majority of departments rated both the Control & Handling and the Braking of their patrolcars Satisfactory or better at all speeds. Both of these performance characteristics were given lower ratings at higher speeds: More than half of the departments rated both Control and Braking Excellent at speeds under 30 mph while only 10% of departments rated these characteristics Excellent at speeds over 70 mph (and about one-fourth of the total respondents rated these characteristics Poor at over 70 mph).

Table 8A & B.-1. Ratings Given to Patrolcar Control & Handling and Patrolcar Braking at Various Speeds.

SPEED:	% ALL DEPARTMENTS GIVING THAT RATING:					
	% Saying Excellent		% Saying Satisfactory		% Saying Poor	
	Control	Braking	Control	Braking	Control	Braking
Under 30 mph	55	59	42	38	0	1
30-70 mph	26	36	69	68	4	5
Over 70 mph	10	10	60	54	25	31

The majorities of departments within all seven Department Types also gave better ratings to Control & Handling at lower speeds. State police and Townships more often gave ratings of Excellent at lower speeds than did the other Department Types.

Table 8A & B-2. Ratings of "Excellent" Given to Control and Handling and to Braking of Patrolcars at Various Speeds, by Department Type.

DEPARTMENT TYPE:	% Dept. Type Giving Rating of EXCELLENT on Control & Handling at Speeds of:			% Dept. Type Giving Rating of EXCELLENT on Braking at Speeds of:		
	Under 30 mph	30-70 mph	70+ mph	Under 30 mph	30-70 mph	70+ mph
Township	72	41	17	69	34	10
State	70	47	11	77	43	6
City (50+)	59	18	5	58	16	7
City (1-9)	55	28	10	65	29	9
City (10-49)	52	21	8	56	19	10
County	46	26	15	56	36	24
50 Largest	46	17	7	43	15	4

Overall, and within the seven Department Types, the ratings given for patrolcar Braking were similar to the ratings of Control & Handling. Only at speeds of over 70 mph was there a tendency for Braking to be rated Poor. This increase in Poor ratings was contributed mostly by State departments; Only 6% of the State departments said patrolcar Control & Handling was Poor at speeds over 70 mph, but 26% of State departments said Braking was Poor at those higher speeds. Note, that State departments spend a greater proportion of their driving time at higher speeds than any other Department Type (see preceding discussion of Q. 7).

9A. On the average, how long does it take an officer to become accustomed to the controls and instruments of a new patrolcar?

Less than a day
More than a day, less than a week
More than a week, less than a month
More than a month

9B. On the average, how long does it take an officer to become accustomed to the handling and performance of a new patrolcar?

Less than a day
More than a day, less than a week
More than a week, less than a month
More than a month

Almost all responding departments (92%) reported that it took less than a week to get used to the Controls & Instruments in a new patrolcar. Fewer departments (74%) felt that it was possible to become accustomed to the Handling & Performance in this time period: About one-fifth of the departments said it took more than a week to get used to the Handling & Performance of a car, while only 7% felt it took this long to become familiar with the Instruments.

Table 9A & B. Time Needed by Officers to Become Accustomed to a New Patrolcar, by All Respondents.

TIME:	Time Needed to get Used To Controls & Instruments % All Departments	Time Needed to Get Used Handling & Performance % All Departments
Less Than a Day	41	20
1 Day - 1 Week	51	54
1 Week - 1 Month	7	20
More than 1 Month	1	2

10. About how many miles per gallon of gas do your patrolcars get?

Less than 8 miles/gallon
8-11 miles/gallon
12-15 miles/gallon
More than 15 miles/gallon

Ninety percent of the responding departments said their patrolcars got less than 12 miles/gallon of gasoline. Seven-tenths of the departments got between 8 and 11 miles/gallon. Cities and Townships more often reported getting less than 8 miles to a gallon (17%-37%) than did Counties and States (6-7%). Almost all State departments (94%) reported getting 8-11 miles/gallon.

Table 10. Miles per Gallon of Gasoline Per Patrolcar, by Department Type.

MILES/GAL:	DEPARTMENT TYPE:						
	% All Depts Types	% City 50+	% 50 Largest	% City 10-49	% Town-ship	% City 1-9	% County	% State
Less than 8	21	37	35	22	17	17	7	6
8-11	69	59	63	73	76	70	60	94
12-15	10	4	2	3	7	13	32	0
More than 15	0	0	0	0	0	0	1	0

2.2.5 Patrolcar Features and Options

11A. When your new patrolcars come from the manufacturer, what changes or additions are made for your department (either by you or by your dealer)? (X EACH ITEM THAT APPLIES)

(For the choices supplied, see Table 11A-1, Page 41)

Police departments indicated that they, or their dealers, were making many changes to the manufacturers' basic models in

order to adapt them to patrol use. In addition to the twelve more common changes listed in the questionnaire for "check-off", 29% of the respondents listed at least one "other" item which did not appear on that original list.

Table 11A-1. Percentages Making Each Change in Manufacturers' Basic Models, by All Respondents.

ACCESSORY/CHANGE:	% All Departments* (n=449)
Install siren	98
Install mobile radio	98
Install P.A. sysem	75
Install bar flashing lights	69
Install spotlights	61
Install gun racks	56
Install bubble lights	54
Install mounting racks	51
Install barrier between seats	43
Install trunk racks	38
Special engine changes	2
Remove chrome	0
Other	29

* Percentages add to more than 100% since each department could mark each choice that applied.

Townships and larger City departments (more than 10 officers) reported more additions than did States, Counties and Cities (1-9). The most common changes made, according to all respondents, were installations of Sirens (98%), Mobile Radios (98%), P.A. Systems (75%), and Bar Flashing Lights (69%). Table 11A-2 highlights the results of this question.

Table 11A-2. Percentages* of All Departments and Ranges of Percentages Within Department Types Making Each Accessory/Change.

ACCESSORY/CHANGE:	% All Depts.	Lowest Dept. Type %	Highest Dept. Type %
Siren	98	Township = 93	City 1-9 = 100
Mobile Radio	98	County = 94	City 50+ = 99
P.A. System	75	City 1-9 = 60	50 Largest = 85
Bar Flashing Lgts.	69	State = 47	City 10-49 = 87
Spotlights	61	State = 23	Township = 79
Gun Racks	56	State = 34	City 10-49 = 69
Bubble Lights	54	City 10-49 = 43	50 Largest = 72
Mounting Racks	51	State = 17	City 10-49 = 67
Barrier Between Seats	43	State = 17	50 Largest = 61
Trunk Racks	38	State = 26	Township = 52
Special Engine Changes	2	State, County = 0	Township = 7
Remove Chrome	0		Township = 3
Other	29	County = 17	State = 60

* Percentages for total and for each Department Type add to more than 100% since each department could mark each item that applied.

Many "other" changes were specified by the departments. Because mention of these items was scattered across respondents, the percentages are not presented. The general categories of "other" additions/changes are listed below:

- Special tires
- Writing desk
- Seat covers/floor mats
- Interior trunk release
- Radar installation
- Remove door/window handles
- Disconnect interior lights
- Map/interior light
- Wiring
- Electronic Device to compute speed from time and distance
- Fuel changeover system
- Fire extinguisher mount
- Console/controls for lights/sirens
- Push bumpers
- Baton/flashlight holder
- Rear flashing lights
- Grill lights
- Flashing headlights
- Painting/decals

11B. What problems do you have making these changes to the "Manufacturer's regular model"? (For the items you marked in Question 11A.)

This question was left "open-ended" to allow respondents to write in any problems they had had with converting standard automobiles into police patrolcars. Slightly more than half (57%) of the departments listed some problems; the others wrote in "no problems" (30%) or left the question blank (13%).

Codes were developed to handle the answers given by departments. The problems most commonly encountered by departments while making changes in standard automobiles are shown in Table 11B.

Table 11B. Problems in Converting Standard Automobiles to Patrolcars for Police Use, by All Respondents.

PROBLEM:	% All Departments* (n=449)
Lack of room/appropriate place to install/mount	17
Must modify car/buy new equipment to install	13
Year-to-year design/model changes cause problems	11
Takes times/adds costs/depreciates vehicle	10
Lack of appropriate support to install/mount	6
Wiring problems	6
"Other"	5
Availability of mechanics	1
Slight problems, unspecified	6
None, No Problems	30
No Answer	13

* Percentages, except for "No Answer," "None, No Problems," and "Slight Problems," may represent double counting since each department could give two answers.

12. Which of the following options were included the last time your department bought patrolcars? (X EACH ITEM THAT APPLIES)

(For choices supplied, see Table 12-1. below.)

Of the fourteen options listed for "check-off", all but three (Bullet-proof Glass, Locking Gas Cap, and Bucket Seats) had been specified by at least one-third of the respondents when they last bought patrolcars. Six of the fourteen had been specified by more than 80% of the responding departments. In addition, 30% of the departments listed at least one "Other" option that they had asked for the last time they bought patrolcars.

Table 12-1. Percentages of Departments Which Specified Each Option the Last Time They Bought Patrolcars.

OPTION:	% All Departments* (n=449)
Automatic transmission	95
Eight-cylinder engine	94
Power steering	90
Power brakes	86
Disc brakes	84
Heavy duty suspension	83
Air conditioning	59
Tinted glass	52
Interior hood release	49
Light in trunk	45
Interior trunk release	37
Locking gas cap	10
Bucket seats	4
Bullet-proof glass	0
Other	30
No Answer	1

* Percentages add to more than 100% since each department could mark each option that applied.

As can be seen in Table 12-2., State police had specified more options that the other Department Types. The top six options

on the list (Automatic Transmission, Eight-cylinder Engine, Power Steering, Power Brakes, Disc Brakes and Heavy Duty Suspension) were chosen by 80%, or more, of the departments in every Department Type except Counties and Cities (1-9), where the lowest percentage observed was 68%.

Table 12-2. Options Specified by 60% or More of the Departments in Each Department Type.

OPTION:	DEPARTMENT TYPE:							
	% All Depts.	% State	% 50 Largest	% City 10-49	% City 50+	% City 1-9	% Township	% County
Auto. Transmission	95	98	100	98	95	95	90	87
8-cylinder Engine	94	98	100	94	93	95	93	85
Power Steering	90	91	89	94	95	85	93	79
Power Brakes	86	96	89	88	84	80	83	82
Disc Brakes	84	98	96	82	86	77	83	79
Heavy Duty Susp.	83	98	91	87	84	76	90	68
Air Conditioning	59	81	63		71		-	
Tinted Glass	52	70	-		67		-	
Interior Hood Rel.	49	81	63				-	
Light in Trunk	45	66					-	
Interior Trunk Rel.	37	60					62	

Thirty percent of the 449 departments specified at least one "Other" option in addition to those listed on the questionnaire. "Heavy duty battery, alternator or electrical system" was volunteered by 8% of departments which listed other options, a striking rate since the item was not originally listed. Other Options listed were:

- Special tires/tire size
- Special cooling system
- Heavy Duty seats
- Special gauges or dials
- Special interior light
- Rear window defroster
- AM radio
- Special seat covers/upholstry
- Spotlight
- Power windows
- Special engine
- Floor mats/carpet
- Special traction device
- Special mirrors
- Special hand throttle
- Special suspension
- Heavy duty shock absorbers
- Fuel transfer kit
- Special gearing
- Split-bench front seat

13. About how much does a new patrolcar cost without trade-in? (Include costs for changes, specified by you, which the dealer makes.)

Under $2500
$2500-2999
$3000-3499
$3500-3999
$4000-4499
$4500-4999
$5000 or more

About half (51%) of the respondents said new patrolcars for their departments cost less than $3500. The majority (72%) of all departments and the majority of departments in every Department Type said new patrolcars cost between $3000 and $3999.

Table 13-1. Amount Paid For New Patrolcars by Responding Departments.

PRICE OF NEW PATROLCARS:	% All Departments
Under $3000	12
$3000-3499	39
$3500-3999	33
$4000-5000	13
Over $5000	1

Departments with the smaller fleets of patrolcars (Counties, Townships, Cities (1-9), and Cities (10-49) had higher percentages of departments paying more than $4000 for their patrolcars than did the larger Cities and State departments.

Table 13-2. Amount Paid For New Patrolcars, by Department Type.

DEPARTMENT TYPE:	PRICE RANGE:			
	$4000 or more	$3000-3999	Under $3000	No Answer
	% Dept. Type	% Dept. Type	% Dept. Type	% Dept. Type
Township	24	62	13	0
County	23	55	13	8
City (1-9)	19	69	12	0
City (10-49)	16	73	10	2
State	9	91	0	0
City (50+)	5	83	12	2
50 Largest	4	74	22	0

14. What equipment is normally carried in your patrolcars? (X EACH ITEM THAT IS CARRIED IN NEARLY EVERY PATROLCAR)

(For choices supplied, see Table 14 below.)

More than half of the departments routinely carried in their patrolcars the following equipment items: Clipboard, Fire Extinquisher, Flares, First Aid Kit, Shotgun, Batons, Blankets, Extra Ammunition and Brief Case. Further, more than one-fourth (29%) of the departments said they carried at least one item of equipment in addition to those in the questionnaire.

Table 14. Equipment Routinely Carried In Patrolcars By 50% or More of the Departments in a Particular Department Type and Percentage of Total Respondents Carrying This Equipment.

EQUIPMENT ITEM:	DEPARTMENT TYPE:							
	% All Depts.	% Township	% City 1-9	% County	% State	% City 10-49	% City 50+	% 50 Largest
Clipboard	84	97	95	86	85	83	72	70
Fire Extinguisher	83	100	76	81	96	86	83	70
Flares	81	100	87	81	91	77	76	67
First Aid Kit	79	90	83	76	98	80	71	65
Shotgun	73	69	72	79	77	76	69	70
Batons	67	72	74	62	85	54	61	72
Blankets	64	72	54	65	77	73	64	
Extra Ammo	55	55	61	72	77	53	-	
Brief Case	53	69	56	62	-		53	
Camera & Film	32				55			
Hand-held Radio	30				-			
Riot Equip.	28				77			
Fingerprint Kit	19				-			
Field Detection Kit	6				-			
Other	29				57			

State police departments carried more equipment items in their patrolcars than other Department Types. State police more commonly carried Riot Equipment (77%) than other Department Types (18-28%). Two-thirds, or more, of the Fifty Largest Cities carried the first six items listed in Table 14., but less than half of them carried any of the other items.

A variety of items was carried by the responding departments in addition to the items listed in the questionnaire:

"OTHER" EQUIPMENT ITEMS

- Pry bar/wrecking bar
- Flashlight
- Measuring tape/wheel
- Oxygen/Resuscitator
- Rope
- Dog equipment
- Rain gear/Bad weather gear
- Axe
- Shovel
- Traffic cones/reflectors
- Lug wrench
- Snow chains
- Life ring/life jacket
- Jumper cables
- Broom
- Report forms/books
- Radar
- Equipment box
- Tow chain
- Water or gasoline container
- Portable barricades
- High visibility clothing
- Tear gas/gas mask
- Jack
- Spare tire
- Splint
- Tape recorder
- Rifle

14A. What problems have you had, if any, storing in the car the equipment that is usually carried in your patrolcars? (NAME THE ITEM OF EQUIPMENT AND DESCRIBE THE "PROBLEM" IN THE SPACES PROVIDED.)

More than one-third (39%, n=175) of all respondents listed at least one "problem" associated with storing equipment items in their patrolcars. The answers given by these departments were tabulated in three ways: (1) number of departments citing a specific item of equipment as having a problem associated with it; (2) number of departments citing a specific problem; and (3) a cross-tabulation of specific equipment item with a specific problem. This third tabulation will not be discussed because the numbers in each equipment item/problem group are too small to draw any generalizations.

Table 14A-1. Equipment Items Named as Being Associated With Storage Problems, by All Responding Departments.

EQUIPMENT ITEM:	% All Departments* (n=449)
Shotgun	16
First aid kit	7
Flares	6
Trunk items in general	6
Fire extinguisher	5
Communications equipment	4
Blankets	3
Storage box	2
Equipment in general	2
Batons	2
Camera & film	2
Clipboard	2
Hand-held radio	1
Extra ammunition	1
Briefcase	1
Riot equipment	1
Oxygen tanks	1
Flashlight	1
Dog equipment in general	1
Spare tire/spare tire mounts	1
Siren	1
None/No Problem	24
No answer	37

* Percentages, except for "None" and "No Answer", may represent double counting since departments could list up to four equipment items/problems.

The Shotgun was the only item presenting equipment storage problems for a significant percentage (16%) of the respondents. These respondents, however, had differing storage problems; no one problem was cited by more than 2% of the respondents.

Table 14A-2. Departments Which Had No Storage Problems and Departments Which Had Problems Storing Shotguns, by Department Type.

DEPARTMENT TYPE:	Have Had No Problems in Storing Equipment ("No Problems, "No Answer") % Dept. Type	Listed Shotguns as an Equipment Storage Problem % Dept. Type
County	75	4
City (1-9)	67	11
State	66	9
Township	66	7
City (10-49)	57	27
City (50+)	50	25
50 Largest	48	15

The larger City Department Types (Fifty Largest, 50+) most often reported problems storing equipment; Counties least often reported such problems. Shotgun was the item of equipment most frequently listed as a storage problem by all Department Types except Townships (in which 14% listed First Aid Kits) and Counties (in which no single item was listed by many departments). Within Department Types, the shotgun was most often mentioned as a storage problem by medium sized Cities (10-49 Officers, 50 or More Officers).

Table 14A-3. Storage Problems Listed as Being Associated With Storing Equipment Items in the Patrolcars.

STORAGE PROBLEM:	% All Departments* (n=449)
No appropriate place to store (general)	18
Gets dirty or damp	16
Not enough room to store in place desired	14
Difficult to store/mount (general)	9
No appropriate place to store that is also accessible	6
Not enough support to install/mount	2
Year-to-year design/model changes	2
Problem with equipment, not storage	2
Threatens safety	1
Problem unspecified	1
None/No problems	24
No answer	37

* Percentages, except for "No Problems" and "No Answer", may represent double counting since each department could cite up to four equipment items/problems.

The storage problems listed by departments were coded into eleven general categories. Most of the responses fell into three of the categories: No Appropriate Place to Store, Item Gets Dirty or Damp, or Not Enough Room to Store in Place Desired.

15. Which of the following features do you think should be on all of your patrolcars? (CHECK EACH ITEM THAT APPLIES REGARDLESS OF WHETHER YOU KNOW IT IS NOW AVAILABLE OR NOT.)

(For choices supplied, see Table 15 and 15A-1.)

15A. Which three of the above features (items checked in Question 15) would be most improtant to have on all of your patrolcars?

Twenty-three features were listed in the questionnaire for "check-off". Of those 23, seventeen were felt to be essential in all the patrolcars of more than half of the responding departments.

The feature receiving the lowest percentage (Noise Sound-proofing) was still felt to be essential to one-third of the departments. Since none of the features listed was "standard" on current automobiles, these answers imply that current model cars probably require many optional features and modifications in order to make them well suited for patrol use.

A comparison of the answers to Questions 15 and 15A (see Table 15 and 15A-1.) revealed that there were relatively large differences between patrolcar features the departments would like to have on all of their cars and those they thought to be most essential: Those features that were said to be among the <u>three most important</u> (Q. 15A) were not always the ones that received the highest percentages of votes (Q. 15). For example, although 76% of the respondents said that Interior Map Lights should be on all their patrolcars, only 1% of them said that this was one of the <u>three most important</u> features among the choices supplied.

Table 15 & 15A-1. Features Which Departments Said Should Be On All Patrolcars; Features Chosen As The Three Most Important to Have On All Patrolcars; by All Responding Departments.

FEATURE:	% Total Saying It Should Be On All Patrolcars (Q. 15)*	% Total Saying It Is One Of Three Most Important (Q. 15A.)**
Heavy duty suspension	94	38
Interior trunk/hood release	85	7
Air conditioning	85	42
Tinted glass	83	3
Interior map light	76	1
More durable seat springs	72	7
Barrier between seats	72	31
Central door lock	71	10
Better ventilated upholstry	71	7
Built-in crash bars	70	32
Communications console	69	24
Additional headroom	63	14
360° Mirror	63	6
Built-in mounting brackets	62	7
Bumpers with push bars	58	6
Built-in shelves in trunk	56	6
Locking gas cap	50	2
Additional legroom	44	5
Larger glove compartment	40	2
Bullet-proof glass	38	10
Fold-out desk in front	37	3
Bucket seats with console	37	8
Noise soundproofing	33	1
Other	22	12

* Percentages add to more than 100% since each department could mark each answer that applied.

**Percentages add to approximately 300% since each department was allowed three answers.

The features felt to be among the three most important by 20% or more of the responding departments were: Air Conditioning, Heavy Duty Suspension, Built-in Crash Bars, Barriers Between Seats and Communications Consoles.

Table 15 & 15A-2. Features Chosen Among The Three Most Important By 25% Or More Of Departments, by Department Type.

FEATURE:	DEPARTMENT TYPE:							
	% All Depts.	% State	% City 1-9	% City 10-49	% 50 Largest	% County	% Town-ship	% City 50+
Air Conditioning	42	62	43	42	41	40	38	35
Heavy Duty Suspension	38	51	39	30	61	33	38	30
Built-in Crash Bars	32	34	30	36	-	33	24	37
Barrier Between Seats	31	-	38	36	30	28	34	35
Communications Console	24	-	29	-	-	31	24	29
Additional Headroom	14	30	-	-	-	-	-	-

Among the department types, State police more often placed Air Conditioning and Additional Headroom among the three most important features than did other Department Types. The Fifty Largest Cities and States placed greater importance on Heavy Duty Suspension than other Department Types.

Twenty-two percent of the responding departments listed at least one "other" feature that they said should be on every patrolcar, and 12% of the total said that some "other" feature was one of the three most important features.

"OTHER" CATEGORIES

- Power windows
- Special tires
- Special cooling system
- Disc brakes/power disc brakes
- Heavy duty electrical system
- Larger engine
- Special door locks
- Special bumpers
- Fuel transfer
- Special restraint system
- Heavy duty transmission
- Special built-in equipment
- Spotlight
- Roll bars in roof
- Rear window defroster/defogger
- Special storage
- Additional room/bigger door in rear
- Special suspension
- Special traction
- Front window vents
- Split bench front seat

2.2.6 Maintenance and Repairs

16. What is the average downtime per patrolcar per month for service and repair?

Less than 3 days per month	9-11 days per month
3-5 days per month	12-14 days per month
6-8 days per month	More than 14 days per month

The majority of all departments (62%) said they had an average of less than three days of downtime per patrolcar per month, and 94% said they had five days or less. The larger City departments (10 or more officers) appeared to be losing more patrolcar time to service and repair than the other Department Types.

Table 16. Days of Downtime Per Patrolcar Per Month by Department Type.

DAYS OF DOWNTIME PER MONTH:	DEPARTMENT TYPE:						
	% Township	% City 1-9	% County	% State	% City 50+	% City 10-49	% 50 Largest
Less than 3	79	76	75	72	53	51	37
3-5	14	23	18	28	39	43	48
More than 6	3	1	4	0	8	5	13

17. Listed below are four factors that may be causes of patrolcar "downtime". Look over the entire list, and then place an X by the item that most often causes patrolcar "downtime" in your department.

Length of time to actually perform the service/repair.
Frequent need for service/repair.
Delay in getting parts.
Shortage of mechanics/repairmen (heavy workload in service facility)
Other (Specify)

The responses of the 449 responding departments were about evenly divided among the four causes of patrolcar downtime. Among

Department Types, about half of State police cited delays in getting parts compared to only about one-fourth of the departments as a whole. The largest Cities (Fifty Largest, 50+ Officers) most often said that a Shortage of Mechanics was the main cause of their downtime while Townships most often reported Time to Actually Perform Service/Repair.

Table 17. Causes of "Downtime" in Patrolcars, by Department Type.

CAUSE:	DEPARTMENT TYPE:							
	% All Dept.	% 50 Lgst.	% City 50+	% County	% City 1-9	% City 10-49	% State	% Township
Shortage of mechanics/ repairmen	30	43	42	33	29	22	17	10
Delay in getting parts	26	26	22	26	21	22	49	21
Frequent need for service/repair	24	22	25	17	27	34	21	10
Time to actually perform service/repair	23	15	23	21	20	23	15	59

The "Other" responses to this question were varied, and no categories were developed. Examples of these are "Distance from service facility", "Poor mechanics", "Time for insurance claims", "Car not heavy duty enough", etc.

18. In what THREE areas does the majority of your patrolcar service/repairs occur. (Do not include oil changes and scheduled tune-ups.)

Body work	Service of air conditioner
Brake system	Electrical system
Standard transmission system	Auxiliary (non-automotive) electrical equipment
Automatic transmission system	Rear end maintenance
Replacement of tires	Engine
Front end alignment	Other (Specify)

Two of the choices, Engine (56%) and Brake System (51%) were selected by more than half of the respondents. Five more of the eleven choices were selected as high service/repair areas by one-fourth or more of the responding departments.

Table 18-1. The "Three" Areas of Highest Service/Repair.

SERVICE/REPAIR:	% All Departments* (n=449)
Engine	56
Brake System	51
Replacement of tires	45
Front end alignment	38
Electrical system	29
Automatic transmission system	26
Body work	24
Auxiliary electrical equipment	9
Service of air conditioning	6
Rear end maintenance	2
Standard transmission	0
Other	6

* Percentages add to approximately 300% since departments were asked to select the three major areas.

There were considerable differences among the seven Department Types in the areas they selected as having the highest requirements for service and repair. Table 18-2. presents the three choices within each Department Type which received the highest percentages of "votes".

Table 18-2. The Three Highest Votes (Percentages*) Within Each Department Type for Cause of Patrolcar Service/Repair.

SERVICE/REPAIR:	DEPARTMENT TYPE:							
	% All Depts.	% State	% County	% Town-ship	% City 1-9	% City 10-49	% City 50+	% 50 Largest
Engine	56	87	47	52	57	53	59	-
Brake System	51	40	-	-	41	59	63	74
Replace Tires	45	-	62	66	62	59	-	-
Front Align.	38	-	62	55			-	-
Elec. System	29	43					-	-
Auto. Trans.	26						-	43
Body Work	24						39	59
Aux. Elec. Eq.	9							
Service AC	6							
Rear end Main.	2							
Std. Trans.	0							

* Each department was allowed to give three answers to this question.

These Department Type differences in service/repair experience may have been a result of the different kinds of driving done (Q. 3 and Q. 7). For example, State departments which did 64% of their driving at speeds over 50 mph experienced a higher percentage (87%) of Engine service/repair problems than did any of the other Department Types. On the other hand, the data do not suggest why the smaller departments had higher percentages of departments citing Replacement of Tires as a major service/repair area (Townships, City (1-9), City (10-49) and Counties; Range=59-66%. States, Fifty Largest, and City (50+); Range= 7-25%).

Other interesting trends in the data show that the larger Cities had higher percentages of departments saying that Brake

System was an area of high concern: City (10-49) = 59%; City (50+) = 63%; and the Fifty Largest = 74%. In addition, the two largest City types had higher percentages of departments listing Body Work, and over half of the Counties and Townships listed Front End Alignment as a problem area.

19. What features of your present patrolcars do you consider dangerous to the occupants, and how are they dangerous? (NAME THE PATROLCAR FEATURES AND DESCRIBE THE DANGER IN THE SPACES PROVIDED BELOW.)

Codes were developed from the narrative answers the respondents gave to this question. These coded responses were then tabulated in three ways: (1) number of departments mentioning a particular system or aspect of the patrolcar as dangerous, (2) number of departments describing a particular danger, and (3) a cross-tabulation of those departments mentioning a specific danger with respect to a specific system or aspect of the patrolcar. Each department could list up to four dangerous features/dangers.

Table 19-1. Departments Indicating Dangerous Features of Patrolcars, by Department Type.

DEPARTMENT TYPE:	Listed At Least One Dangerous Feature % Dept. Type	None/No Answer % Dept. Type
50 Largest	59	41
City (50+)	56	42
City (10-49)	54	46
Township	48	52
City (1-9)	43	57
County	38	62
State	36	64
All Dept. Types	48	52

Almost half of the responding departments (48%) listed at least one patrolcar feature that they felt to be dangerous to the occupants. States and Counties least often listed dangerous features; larger Cities (more than 10 officers) most often listed them.

Partially because of the open-ended nature of the question, respondents cited a wide variety of dangerous features. Thus, because of the large number of different responses, the percentages for any one feature were uniformly low with the exception of Brake System (32% of those listing any dangerous feature).

Table 19-2. Patrolcar Features Listed as Dangerous.

DANGEROUS FEATURE:	% All Departments Listing At Least One Dangerous Feature.* (n=216)
Brake system	32
Suspension system (front & rear)	18
Body construction/strength	15
Restraint system	13
Auxiliary front seat equipment	13
Lack of barrier between the seats	11
Engine performance	9
Doors/door locks	9
Shotgun mount/holder/rack	7
Tires	6
Windshield/windows	6
Lack of crash bars/roof support	6
Seats (front & rear)	5
Rear view mirror/corner post	5
Bumpers	4
Insufficient headroom/legroom	4
Design problem (general)	4
Exhaust system/ventilation	4
Light weight	3
Transmission system	2
Steering wheel/column	2
Spotlight	2
Radio mount/controls	2
Wiring	1
Miscellaneous	24

* Percentages may represent double counting since each department could list up to four dangerous features/dangers.

Using the narrative answers, categories were developed to describe how the features listed were felt to be dangerous. Only three of these categories approached 20% of the departments responding to this question: Failure or Lower Performance at High Speeds (22%); Failure in General (22%), and Potential Cause of Injury During Collision (20%). Note, again, that slightly fewer than half of the responding departments did not answer this question and are not included in the tabulation.

Table 19-3. Description of How the Dangerous Features Were Dangerous.

PROBLEM:	% All Departments Describing at Least One Danger.* (n=205)
Failure or lower perform. at high speeds	22
Failure in general	22
Potential cause of injury during collision	20
Decreases control of vehicle	15
Insufficient for purpose	14
Prisoner transport more hazardous	13
Potential cause of injury (general)	13
Interferes with officer duty	13
Failure during collision	13
Stress or wear causes failure	10
Lack of protection (general)	9
Not strong enough (general)	9
Decreases visibility	8
Not enough room (general)	5
Design problem (general)	5
Interferes with driver	4
Not heavy enough (general)	3
Not secured (general)	2
Other	14

* Percentages may represent double counting since each department could list up to four dangerous features/ how dangerous.

The intent of developing these "problem" categories was for use in cross-tabulation with the dangerous features. However, because only about half the respondents listed any dangerous features, because there was such a wide variety of both features cited and descriptions of how the features were dangerous, no discussion of this cross-tabulation may be found in Appendix B, will be presented.

2.2.7 Safety Standards

20. Do you think that separate safety standards are needed for patrolcars? That is, do you think that the safety standards for police vehicles need to be different than the safety standards for cars used by the general public?

Why, or Why not?

More than three-quarters (78%) of the respondents said there should be separate safety standards for patrolcars than those for the general public. Most departments within each Department Type agreed that different safety standards were needed.

Table 20-1. Percentages of Departments Which Felt That Separate Safety Standards Are Needed For Patrolcars, by Department Type.

DEPARTMENT TYPE:	Yes, Separate Standards Needed % Dept. Type	No, Separate Standards Not Needed % Dept. Type	No Answer % Dept. Type
City (1-9)	84	12	4
Township	83	17	0
City (10-49)	81	18	1
State	79	21	0
City (50+)	76	22	2
50 Largest	74	26	0
County	68	26	6
All Dept. Types	78	20	2

Of those who said separate safety standards were needed, the reasons given for this answer generally fell into three categories: 33% of the 349 said that patrolcars were subjected to different uses than civilian cars, in general, (e.g., "considering the use a police vehicle gets as opposed to the general public..."; "because of the severity of service required of patrolcars..."; "the type of driving is completely different on a patrolcar than the average motorist"). Thirty percent of those who said patrolcar safety standards should be different said that the reason for this belief was the fact that patrolcars were used in high speed situations: (e.g., "sudden high speed chases"; "because of standing starts to high speed and long, high speed runs, etc."; "...are often involved in high speed chases"). Twenty-six percent of those who voted for separate safety standards for patrolcars said their reason was the fact that patrolcars get more use than a civilian car: (e.g., "continual day in day out hard usage..."; "police vehicles are used much harder than most pleasure cars and should be safer and stronger"; "patrolcars are driven more than a personal car will ever be used"; "patrolcars are out in the public 24 hours a day").

There was some variation among the seven Department Types in the reasons they gave for thinking that safety standards for patrolcars should be different than those for the general public. The Fifty Largest Cities (12%) and Townships (17%) more frequently mentioned that they had Many Drivers for Same Car than did the other Department Types (0-5%). States (49%) and Counties (49%)

more often listed High Speed Use as a reason for separate standards than did other departments (14-36%).

Table 20-2. Reasons Supplied by the 349 Departments Which Said Safety Standards for Patrolcars Should Be Different Than the Safety Standards for Cars Used by the General Public.

IF "YES", WHY?:	% All Depts. Saying YES to Q. 20 (n=349)	Percentage Range Among Seven Department Types
Diff. use than civ. car	33	41% (County) to 27% (Cities 10-49)
High speed use	30	49% (States, County) to 14% (City 50+)
More use than civ. car	26	42% (Township) to 14% (County)
Mention specific aspect or system of patrolcar	18	38% (State) to 8% (City 10-49, Township)
Greater risk, more exposure to accidents	15	26% (City 1-9) to 4% (Township)
Used under extreme driving conditions (weather, roads)	12	21% (Township) to 3% (50 Largest)
Many drivers for same car	4	17% (Township) to 0% (State)
Variety of driving speeds	3	8% (Township) to 0% (County, City 1-9)
Other	3	
No Answer	8	

* Percentages add to more than 100% since each department could give two answers to this question.

Ninety departments (20% of all respondents) said that they did not think safety standards for patrolcars should be different than those for the general public. By far the most common reason

for believing safety standards for patrolcars should not be different was that departments felt safety standards should apply equally to all cars: (e.g., "everyone is as important to his family as an officer is to his"; "safety standards should apply equally to all vehicles and should provide the maximum amount of protection to all drivers and passengers"; "all vehicles should have all safety features technologically possible"). More than one-third of the departments who said standards should not be different, however, gave no reason for that answer.

Because of the small numbers of departments within the seven Department Types who said "no" to this question, the table below will present percentages for the total only.

Table 20-3. Reasons Supplied by the 90 Departments Which Said Safety Standards for Patrolcars Should Not be Different From the Safety Standards for Cars Used by the General Public.

IF "NO", WHY NOT?:	% Departments Which Said NO to Q. 20.* (n=90)
Safety standards should apply equally to all cars	37
No need (general)	9
Would cost too much	4
No high speed driving	3
Good driving eliminates need	3
Good maintenance eliminates need	2
Other	7
No Answer	39

* Percentages may add to more than 100% since each department could give two answers to this question.

2.2.8 Comments from Respondents

COMMENTS

A Comments page was appended to the end of the questionnaire. As might be expected at the end of a rather lengthy questionnaire, the response rate was low. The comment page on the Patrolcars DQ drew responses from 69 of the 449 respondents (15%). These comments were well thought out and, in general, revealed a high degree of concern by the respondents for their patrol vehicles.

Table iii. Departments Supplying Additional Comments About Their Patrolcars, by Department Types.

DEPARTMENT TYPE:	% That Department Type Supplying a Comment
State	15
County	8
City (1-9)	13
City (10-49)	17
City (50+)	22
50 Largest	15
Townships	17

No attempt was made actually to tabulate the comments. They have been retained verbatim, and are available for research purposes (without the information that would identify the particular department). These comments identified two areas of high concern to the departments: The need for, or possibility of, designing a police vehicle specifically for police use; and the need for examination of the currently available "police package" in terms of whether or not it is meeting police needs.

Exempletive responses follow:

"We recommend that a special police car be designed and not changed each year. Checker Cabs in the past proved successful along these lines. Cars could be designed so new engines could be replaced as needed. Parts could be replaced even if a car was ten years old. Size of wheels would be standard, year after year."

"Police vehicles should be specially designed vehicles because they are intended for special uses. We are putting things rear end first. We are taking cars designed for the competitive civilian and commercial markets and its uses and trying to adapt them for our specialized uses."

"...the engine, etc., transmission, and rear end of some model/make cars currently offered in the "Police Package" from our experience give satisfactory service, but we have had generally poor experience with chassis and suspension failure."

"Manufacturers should attempt to include the bulk of accessory equipment and electrical terminals for ease in hook-up as standard equipment in their "police-package". Optional factory installed equipment should include: console for radios and storage as well as central location for switches; roll bars and crash bars; frame mounted tow and push bars; and assorted distinctive paint designs for patrol vehicles; compensation of power loss due to antipollution devices; steel plates in back rests of front seat; partition of front and rear seat; electric door locks with provision of emergency manual operation; anti-theft and booby trap devices; reinforced hood, trunk and door panels; bullet-proof glass."

"Most companies are making police packages for their cars at this time, but inspection of the finished product is poor."

"The automobiles produced for use by many departments are generally satisfactory but fail to meet the demands of extended periods of idling or slow moving traffic."

"There is a need for a police vehicle to be designed for high performance, based on information and research of law enforcement agencies."

APPENDIX A

NBS-889
May 1972

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U.S. Department of Commerce
National Bureau of Standards

DETAILED QUESTIONNAIRE: PATROLCARS

POLICE EQUIPMENT SURVEY

Sponsored By:

National Institute of Law Enforcement and Criminal Justice
Law Enforcement Assistance Administration
U. S. Department of Justice

Directed and Conducted By:

Behavioral Sciences Group
National Bureau of Standards
Washington, D.C. 20234
Phone: 301-921-3558

INTRODUCTION: The patrolcar is generally one of the most important and most expensive items of equipment in a police department. In talking with police departments, we have been told of the performance, safety, and comfort shortcomings of their current patrolcars. The Law Enforcement Standards Laboratory is beginning its work on writing performance standards for patrolcars. This work can go on only if the Laboratory can find out the needs of police departments throughout the country.

PURPOSE OF THIS QUESTIONNAIRE: The purpose of this "detailed" questionnaire is to get answers from YOU, the user, about the patrolcars you are currently using; the modifications you make to your current cars; and the problems you are having with them. Your answers will be used to help police departments throughout the country solve their patrolcar problems.

GENERAL INSTRUCTIONS:

1. Fill in the questionnaire completely. Even if you do not have all the information you need "at your fingertips", please make your best effort to supply every answer AS ACCURATELY AS POSSIBLE.

2. Answer all questions for YOUR OWN DEPARTMENT. Do not attempt to supply information that might exist in some other department.

3. The results of this questionnaire will be at least partially compiled by computer. It is important that you follow directions and answer every question legibly and in the boxes and spaces provided.

4. No individual department will be identified in the report of this survey; the results will be published in tabulated form.

5. Additional instructions for filling in your answers appear after some questions. Follow the directions given.

6. Please PRINT all answers and comments CLEARLY.

7. When this questionnaire has been completely filled in; place it, with the other questionnaires sent to your department, in the stamped, addressed envelope supplied. Return all of them to:

   Technology Building, A-110
   National Bureau of Standards
   Washington, D.C. 20034

8. If you have any questions, write to the above address, or call collect:

   E. Bunten, or P. Klaus
   Phone: 301-921-3558

9. Remember that it is only by getting YOUR answers to these questions that it will be possible to begin solving the problems that police have with their patrolcars.

SECTION I: STANDARDS FOR PATROLCARS

INSTRUCTION: This first question asks you to tell us which systems or aspects of your patrolcars are most important to you IN TERMS OF NEEDS FOR STANDARDS.

By this, we mean: Consider a system or an aspect of the patrolcar IMPORTANT (in terms of need for standards) if it is

* something that does not perform satisfactorily;
* something that needs improvement to really meet your needs;
* something that is excellent on some cars but only fair or poor on others.

Consider the system or aspect UNIMPORTANT (in terms of need for standards) if it is

* something that does meet your needs
* something that you consider generally unimportant in your patrolcars.

1. What two general systems or aspects of the patrolcars used by your department need standards most? (MARK X BY 2 OF THE FOLLOWING)

(10-20)*** ____ Cooling system
____ Braking system
____ Transmission system
____ Suspension system
____ Restraint system (i.e., safety belts)
____ Stability and control
____ Collision capacity
____ Ride and comfort
____ Convenience of equipment and controls
____ Engine
____ Other (Specify) _____
____ Other (Specify) _____

***Numbers in parentheses are for computer use only.

SECTION II: CURRENT PATROLCAR USE

2.A. How many of each of the following types of patrolcars do you now have in your department?

	NUMBER	TYPE	
(21-25)	_____	Full Size 2-door	(For example: Ford Custom, Plymouth Fury, or Chevrolet Impala.)
(26-30)	_____	Full Size 4-door	
(31-35)	_____	Intermediate Size 2-door	(For example: Chevrolet Chevelle, Plymouth Satellite, or Ford Torino)
(36-40)	_____	Intermediate Size 4-door	
(41-45)	_____	Station Wagon	
(46-50)	_____	Compact	(For example: Chevrolet Nova, Ford Maverick, or Plymouth Valiant)

2.B. Would it be of any use to your department to be able to buy standard compact (or smaller) cars that were specially designed for police use?

(51) _____Yes _____No

(52-53) Why, or Why not? _____

_____

_____

_____

_____

3. On the average, about how many hours is one of your patrolcars in use during a typical day?

(54-57) _____Under 4 hours

_____4-8 hours

_____9-16 hours

_____17-24 hours

4. On the average, how many different officers drive one patrolcar in a day?

(58-61)

_____1

_____2

_____3

_____More than 3

5. How long is an officer's shift in your department?

(62-65)

_____Under 4 hours

_____4-8 hours

_____9-12 hours

_____Over 12 hours

6. What determines when your department's patrolcars are replaced:

(66) 6A. Mileage? _____Yes _____No (IF YES, MARK X BY ONE OF THE FOLLOWING)

(67-70)

_____Under 20,000 miles

_____20,000-40,000 miles

_____40,001-60,000 miles

_____Over 60,000 miles

(71) 6B. Years of use? _____Yes _____No (IF YES, MARK X BY ONE OF THE FOLLOWING)

(72-75)

_____1 year

_____2 years

_____3 years

_____Over 3 years

(76) 6C. Other? _____Yes _____No (IF YES, LIST BELOW WHAT ELSE MIGHT DETERMINE WHEN YOUR PATROLCARS ARE REPLACED)

(77-80)

_____

_____

_____

_____

7. About what percent of all the miles driven by all the patrolcars in use in your department is at each of the following speeds?

	PERCENT	CONDITION
(10-12)	____	25 - 30 miles/hour with many stops
(13-15)	____	30 - 50 miles/hour with many stops
(16-18)	____	35 - 50 miles/hour with few stops
(19-21)	____	50 - 70 miles/hour
(22-24)	____	Over 70 miles/hour
(25-27)	____	Other (Specify) _____
	100%	TOTAL

8. Please tell us how well your patrolcars usually perform with regard to (A) Control and Handling, and (B) Braking at each of the following speeds: (PUT ONE X ON EACH LINE)

A. CONTROL & HANDLING:	Performance is: Excellent	Satisfactory	Poor
(28-30) Under 30 miles/hour			
30 - 70 miles/hour			
Over 70 miles/hour			

B. BRAKING:	Performance is: Excellent	Satisfactory	Poor
(31-33) Under 30 miles/hour			
30 - 70 miles/hour			
Over 70 miles/hour			

9. On the average, how long does it take an officer to become accustomed to (A) the controls and instruments and (B) the handling and performance of a new patrolcar? (MARK ONE X IN COLUMN A, AND ONE X IN COLUMN B)

	A. CONTROLS AND INSTRUMENTS IN CAR		B. HANDLING AND PERFORMANCE OF CAR
(34-35)	____	Less Than a Day	____
(36-37)	____	More Than a Day, Less Than a Week	____
(38-39)	____	More Than a Week, Less Than a Month	____
(40-41)	____	More Than a Month	____

10. About how many miles per gallon of gas do your patrolcars get? (MARK X BY ONE OF THE FOLLOWING)

(42-45)
_____ Less than 8 miles/gallon
_____ 8 - 11 miles/gallon
_____ 12 - 15 miles/gallon
_____ More than 15 miles/gallon

11.A. When your new patrolcars come from the manufacturer, what changes or additions are made for your department (either by you or by your dealer)? (X EACH ITEM THAT APPLIES.)

(46-58)
_____ Install siren
_____ Remove chrome
_____ Special engine changes
_____ Install spotlights
_____ Install mounting racks
_____ Install bar flashing lights
_____ Install bubble light
_____ Install gun racks
_____ Install trunk racks for portable equipment (flares, etc.)
_____ Install public address system
_____ Install barrier between front and back seats
_____ Install mobile radio
_____ Other (Specify) _____
_____ Other (Specify) _____
_____ Other (Specify) _____

11.B. What problems do you have making these changes to the "manufacturer's regular model"? (For the items you marked in Question 11.A.)

(59-60) _____
_____
_____
_____
_____

12. Which of the following options were included the last time your department bought patrolcars? (X EACH ITEM THAT APPLIES)

(61-75)

_____ Power brakes

_____ Automatic transmission

_____ Bullet-proof glass

_____ Light in trunk

_____ Interior trunk release

_____ Interior hood release

_____ Locking gas cap

_____ Eight-cylinder engine

_____ Heavy duty suspension

_____ Air conditioning

_____ Bucket seats

_____ Tinted glass

_____ Power steering

_____ Disc brakes

_____ Other (Specify) _____

_____ Other (Specify) _____

_____ Other (Specify) _____

13. About how much does a new patrolcar cost without trade-in? (INCLUDE COSTS FOR CHANGES, SPECIFIED BY YOU, WHICH THE DEALER MAKES.)

(10-16)

_____ Under $2500

_____ $2500-$2999

_____ $3000-$3499

_____ $3500-$3999

_____ $4000-$4499

_____ $4500-$4999

_____ $5000 or more

14. What equipment is normally carried in your patrolcars? (X EACH ITEM THAT IS CARRIED IN NEARLY EVERY PATROLCAR)

(17-31)

_____ Hand-held radio
_____ Shotgun
_____ Flares
_____ First aid kit
_____ Extra ammunition
_____ Batons
_____ Camera and film
_____ Clipboard
_____ Briefcase
_____ Fire extinguisher
_____ Blankets
_____ Fingerprint kits
_____ Field detection kits (Narcotic, alcohol detection, etc.)
_____ Riot equipment
_____ Other (Specify) _____
_____ Other (Specify) _____
_____ Other (Specify) _____

14.A. What problems have you had, if any, storing in the car the equipment that is usually carried in your patrolcars? (NAME THE ITEM OF EQUIPMENT AND DESCRIBE THE "PROBLEM" IN THE SPACES PROVIDED)

	EQUIPMENT ITEM	PROBLEM
(32-35)	a. _____	_____
		_____
(36-39)	b. _____	_____
		_____
(40-43)	c. _____	_____
		_____
(44-47)	d. _____	_____
		_____

15. Which of the following features do you think should be on <u>all</u> of your patrolcars? (CHECK EACH ITEM THAT APPLIES REGARDLESS OF WHETHER YOU KNOW IT IS NOW AVAILABLE OR NOT)

(48-71)

_____ Air Conditioning
_____ Tinted glass
_____ Additional headroom
_____ Additional legroom
_____ Bucket seats with console between for storage
_____ Better ventilated upholstery
_____ More durable springs in front seats
_____ Fold-out desk in front seat
_____ Communications console
_____ Larger glove compartment
_____ Barrier between front and back seats
_____ Built-in storage shelves in trunk
_____ Noise soundproofing to silence droning of the motor
_____ Built-in mounting brackets for equipment
_____ Bullet-proof glass
_____ Interior map lamp
_____ Built-in crash bars in hood and doors
_____ Locking gas cap
_____ Bumpers with vertical push bars
_____ Mirrors allowing 360° observation
_____ Trunk and hood releases from inside vehicle
_____ Centrally located door lock control
_____ Heavy Duty Suspension
_____ Other (Specify) _____
_____ Other (Specify) _____
_____ Other (Specify) _____

15.A Which <u>three</u> of the above features (items checked in Question 14) would be most important to have in all of your patrolcars? 15

(72-73) (a) _____
(74-75) (b) _____
(76-77) (c) _____

SECTION III: SERVICE AND REPAIR

16. What is the average "downtime" per patrolcar per month for service and repair? (X ONE OF THE FOLLOWING)

(10-15)

_____ Less than 3 days per month

_____ 3-5 days per month

_____ 6-8 days per month

_____ 9-11 days per month

_____ 12-14 days per month

_____ More than 14 days per month

17. Listed below are four factors that may be causes of patrolcar "downtime". Look over the entire list, and then place an X by the item that most often causes patrolcar "downtime" in your department.

MARK X BY ONE CHOICE

(16-20)

_____ Length of time to actually perform the service/ repair

_____ Frequent need for service/repair

_____ Delay in getting parts

_____ Shortage of mechanics/repairmen (heavy workload in service facility)

_____ Other (Specify) _____

_____ Other (Specify) _____

18. In what THREE areas does the majority of your patrolcar service/ repairs occur. (Do not include oil changes and scheduled tune-ups.)

MARK X BY
3 CHOICES

(21-32)

_____ Body work
_____ Brake system
_____ Standard transmission system
_____ Automatic transmission system
_____ Replacement of tires
_____ Front end alignment
_____ Service of air conditioner
_____ Electrical system
_____ Auxiliary (non-automotive) electrical equipment
_____ Rear end maintenance
_____ Engine
_____ Other (Specify) _____
_____ Other (Specify) _____

SECTION IV: SAFETY

19. What features of your present patrolcars do you consider dangerous to the occupants, and how are they dangerous? (NAME THE PATROLCAR FEATURES AND DESCRIBE THE DANGER IN THE SPACES PROVIDED BELOW)

	DANGEROUS FEATURE	HOW IS IT DANGEROUS?
(33-34) CASE # 1	_____	_____
(35-36) CASE # 2	_____	_____
(37-38) CASE # 3	_____	_____
(39-40) CASE # 4	_____	_____

20. Do you think that separate safety standards are needed for patrolcars? That is, do you think that the safety standards for police vehicles need to be different than the safety standards for cars used by the general public?

41)

_____ Yes _____ No

Why, or Why not? _____

_____

_____

_____

21. GENERAL COMMENTS:

IDENTIFYING INFORMATION: (All identifying information will be kept confidential)

Name of Department: _____

Address: _____

Name of person who answered this questionnaire:

_____
Name

Title: _____ Rank: _____

No. of years experience in law enforcement: _____

Telephone Number: _____

Others who helped: 1. _____
Name

Title: _____ Rank: _____

No. of years experience in law enforcement: _____

Telephone Number: _____

2. _____
Name

Title: _____ Rank: _____

No. of years experience in law enforcement: _____

Telephone Number: _____

NOTES

APPENDIX B

DATA TABLES

B.1 Advice to the Reader

(a) The data presented in the following tables resulted from the responses of a stratified random sample (see Section 1.2) of police departments in response to a specific set of questions (see Appendix A). These data do not, in any way, reflect objective testing of any of the equipment by the National Bureau of Standards. The reader is cautioned to become familiar with the questionnaire and to evaluate the data in terms of the exact questions asked.

(b) Tables have been numbered after the question number (e.g., the tables for Question 6A. would be numbered 6A-1, 6A-2, etc.). The data are usually presented by number of respondents and nearest whole percentage. Because of the statistical limitations imposed by the sample sizes used in this study, the reader is cautioned to be wary of assigning importance to percentage differences of less than 5% when percentages are based on all respondents, and to percentage differences of less than 10% when percentages are based on one of the subsample groups, (e.g., a particular Department Type or Region). No statistical tests of significance are reported.

(c) These tables are based on the responding departments from the specific sample selected for this questionnaire. This sample was not proportional to the total population of police departments, and although it is possible to do so, the data in these tables have not been weighted to allow direct extrapolation to the total population.

(d) In order to extrapolate to the total population from the respondent data presented in this report, use the following procedure: For each Department Type, multiply the percentage of respondents of a particular Department Type giving the answer of interest (See B.2 Data Tables, Appendix B) by the total number of departments of that Department Type in the population (See Table 1.2-2, Section 1.2); add those seven subtotals; and divide the total by the total number of police departments in the population (Table 1.2-2). The quotient of this division will be an estimate of the percentage of all U.S. police departments that would choose the answer of interest.

B.2 Data Tables

Table i-1

NUMBER OF RESPONDENTS BY DEPARTMENT TYPE:

ALL DEPARTMENT TYPES	STATE	COUNTY	CITY (1-9 OFFICERS)	CITY (10-49 OFFICERS)	CITY (50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
449	47	72	82	90	83	46	29

NUMBER OF RESPONDENTS BY REGION:

TOTAL	1	2	3	4	5	6	7	8	9	10
449	42	47	50	48	56	44	42	40	46	34

Table i-2

RANK OF PERSON WHO FILLED IN QUESTIONNAIRE:

RESPONSE

	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
CHIEF	133	30	0	0	2	3	52	63	44	49	18	22	2	4	15	52
CAPTAIN	57	13	15	32	3	4	2	2	4	4	24	29	7	15	2	7
COMMISSIONER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLONEL	3	1	3	6	0	0	0	0	0	0	0	0	0	0	0	0
ACTING CHIEF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ASSISTANT CHIEF	9	2	1	2	0	0	0	0	4	4	4	5	0	0	0	0
MAJOR	11	2	4	9	1	1	0	0	3	3	0	0	3	7	0	0
LIEUTENANT	50	11	7	15	2	3	2	2	11	12	15	18	11	24	2	7
CORPORAL	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
PRIVATE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEPUTY SHERIFF	17	4	0	0	15	21	0	0	0	0	0	0	1	2	1	3
INSPECTOR	4	1	1	2	0	0	0	0	0	0	2	2	1	2	0	0
SHERIFF	32	7	0	0	32	44	0	0	0	0	0	0	0	0	0	0
CONSTABLE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SERGEANT	48	11	4	9	2	3	6	7	16	18	9	11	6	13	5	17
PATROLMAN	26	6	0	0	2	3	9	11	4	4	5	6	3	7	3	10
OTHER TITLE	51	11	11	23	7	10	11	13	4	4	5	6	12	26	1	3
UNDERSHERIFF	5	1	0	0	5	7	0	0	0	0	0	0	0	0	0	0
NO ANSWER	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
TOTAL	449	100	47	100	72	100	82	100	90	100	83	100	46	100	29	100

DEPARTMENT TYPE

Table i-3

YEARS OF EXPERIENCE OF PERSON WHO FILLED IN QUESTIONAIRE:

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
2 OR LESS	24	5	1	2	5	7	11	13	3	3	0	0	2	4	2	7
3-5 YEARS	32	7	1	2	8	11	8	10	7	8	4	5	3	7	1	3
6-10 YEARS	66	15	4	9	15	21	20	24	12	13	7	8	0	0	8	28
11-15 YEARS	79	18	3	6	18	25	15	18	20	22	12	14	8	17	3	10
16-20 YEARS	96	21	16	34	11	15	10	12	21	23	19	23	10	22	9	31
21-25 YEARS	74	16	10	21	6	8	6	7	13	14	25	30	13	28	1	3
26-30 YEARS	37	8	7	15	2	3	5	6	7	8	7	8	6	13	3	10
31 OR MORE	27	6	3	6	6	8	4	5	7	8	4	5	2	4	1	3
NO ANSWER	14	3	2	4	1	1	3	4	0	0	5	6	2	4	1	3
TOTAL	449	99	47	99	72	99	82	99	90	99	83	99	46	99	29	98

Table 1-1

1. WHAT TWO GENERAL SYSTEMS OR ASPECTS OF THE PATROLCARS USED BY YOUR DEPARTMENT NEED STANDARDS MOST? (MARK X BY 2 OF THE FOLLOWING)

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
COOLING SYSTEM	94	21	15	32	20	28	17	21	16	18	12	14	11	24	3	10
BRAKING SYSTEM	163	36	19	40	23	32	27	33	39	43	27	33	18	39	10	34
TRANSMISSION SYSTEM	66	15	4	9	7	10	9	11	13	14	19	23	9	20	5	17
SUSPENSION SYSTEM	67	15	4	9	10	14	14	17	12	13	17	20	9	20	1	3
RESTRAINT SYSTEM	8	2	0	0	2	3	1	1	0	0	3	4	1	2	1	3
STABILITY AND CONTROL	147	33	18	38	25	35	27	33	26	29	23	28	16	35	12	41
COLLISION CAPACITY	78	17	6	13	6	8	10	12	16	18	22	27	12	26	6	21
RIDE AND COMFORT	38	8	4	9	6	8	8	10	8	9	6	7	3	7	3	10
EQUIP/CONTROL CONVENIENCE	97	22	8	17	12	17	26	32	24	27	11	13	7	15	9	31
ENGINE	109	24	12	26	18	25	24	29	25	28	20	24	4	9	6	21
OTHER	34	8	5	11	5	7	5	6	3	3	9	11	6	13	1	3
NO ANSWER	8	2	0	0	6	8	1	1	0	0	0	0	0	0	1	3
TOTAL	909	203	95	204	140	195	169	206	182	202	169	204	96	210	58	197

Table 2A-1

2.A. HOW MANY OF EACH OF THE FOLLOWING TYPES OF PATROLCARS DO YOU NOW HAVE IN YOUR DEPARTMENT?

RESPONSE

	DEPARTMENT TYPE													
	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
FULL SIZE 2-DOOR	1463	3	1251	5	64	4	15	9	9	2	96	4	27	0	1	1
FULL SIZE 4-DOOR	38915	84	24113	88	829	53	129	80	383	83	1707	72	11646	81	108	84
INTERMEDIATE SIZE 2-DOOR	792	2	693	3	50	3	0	0	1	0	15	1	33	0	0	0
INTERMEDIATE SIZE 4-DOOR	4078	9	828	3	549	35	11	7	31	7	421	18	2225	15	13	10
STATION WAGON	1012	2	416	2	56	4	6	4	19	4	78	3	430	3	7	5
COMPACT	302	1	102	0	31	2	0	0	17	4	62	3	90	1	0	0
TOTAL	46562	100	27403	100	1579	100	161	100	460	100	2379	100	14451	100	129	100
NO ANSWER	4		0		2		1		0		0		1		0	

Table 2A-2

2.A. HOW MANY OF EACH OF THE FOLLOWING TYPES OF PATROLCARS DO YOU NOW HAVE IN YOUR DEPARTMENT?

RESPONSE

	DEPARTMENT TYPE							
	ALL DEPARTMENT TYPES	STATE	COUNTY	CITY (1-9 OFFICERS)	CITY (10-49 OFFICERS)	CITY (50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
	AVERAGE NUMBER	AVERAGE NUMBER	AVERAGE NUMBER	AVERAGE NUMBER	AVERAGE NUMBER	AVERAGE NUMBER	AVERAGE NUMBER	AVERAGE NUMBER
FULL SIZE 2-DOOR	3.29	26.62	.91	.19	.10	1.16	.60	.03
FULL SIZE 4-DOOR	87.45	513.04	11.84	1.59	4.26	20.57	258.80	3.72
INTERMEDIATE SIZE 2-DOOR	1.78	14.74	.71	.00	.01	.18	.73	.00
INTERMEDIATE SIZE 4-DOOR	9.16	17.62	7.84	.14	.34	5.07	49.44	.45
STATION WAGON	2.27	8.85	.80	.07	.21	.94	9.56	.24
COMPACT	.68	2.17	.44	.00	.19	.75	2.00	.00
TOTAL	104.63	583.04	22.56	1.99	5.11	28.66	321.13	4.45

Table 2B-1

2.B. WOULD IT BE OF ANY USE TO YOUR DEPARTMENT TO BE ABLE TO BUY STANDARD COMPACT (OR SMALLER) CARS THAT WERE SPECIALLY DESIGNED FOR POLICE USE?

RESPONSE	DEPARTMENT TYPE													
	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
YES	132	29	6	13	16	22	29	35	28	31	32	39	13	28	8	28
NO	312	69	40	85	55	76	53	65	61	68	49	59	33	72	21	72
NO ANSWER/DONT KNOW	5	1	1	2	1	1	0	0	1	1	2	2	0	0	0	0
TOTAL	449	100	47	100	72	100	82	100	90	100	83	100	46	100	29	100

Table 2B-2

IF YES, WHY?

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
ECONOMY	60	45	2	33	8	50	17	59	14	50	13	41	4	31	2	25
HANDLING/MANEUVERABILITY	23	17	0	0	1	6	4	14	5	18	7	22	5	38	1	12
FOR SPECIAL PURPOSE USE	31	23	4	67	5	31	3	10	3	11	9	28	6	46	1	12
REFER TO DESIGN NOT SIZE	10	8	0	0	2	12	0	0	3	11	3	9	0	0	2	25
COMMENT/CAVEAT NOT REASON	8	6	0	0	0	0	1	3	1	4	5	16	0	0	1	12
NOT NEED BIG ENGINE/CAR	16	12	1	17	2	12	5	17	2	7	4	12	1	8	1	12
OTHER	8	6	1	17	0	0	2	7	1	4	3	9	1	8	0	0
NO ANSWER	13	10	0	0	2	12	4	14	4	14	2	6	0	0	1	12
TOTAL	169	127	8	134	20	123	36	124	33	119	46	143	17	131	9	110

Table 2B-3

IF NO, WHY NOT?

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
TOO SMALL/LIGHT: GENERAL	35	11	3	7	7	13	8	15	4	7	5	10	6	18	2	10
TOO SMALL FOR COMFORT CONVENIENCE OF OFFICER	62	20	10	25	6	11	10	19	11	18	13	27	8	24	4	19
TOO SMALL FOR EQUIPMENT	26	8	4	10	4	7	6	11	4	7	1	2	5	15	2	10
NOT AS SAFE AS LARGER CAR	24	8	5	12	2	4	5	9	7	11	4	8	1	3	0	0
ROADABILITY/STABILITY/ PERFORMANCE	50	16	17	42	8	15	6	11	7	11	4	8	5	15	3	14
NOT SUITED TO ALL PURPOSES	26	8	2	5	3	5	4	8	9	15	5	10	2	6	1	5
NOT AS DURABLE	24	8	1	2	3	5	3	6	6	10	7	14	0	0	4	19
NO NEED: GENERAL	36	12	2	5	4	7	9	17	5	8	8	16	5	15	3	14
TOO SMALL FOR PRISONER/ PASSENGER TRANSPORT	49	16	0	0	9	16	8	15	16	26	7	14	7	21	2	10
OTHER	26	8	2	5	10	18	2	4	4	7	5	10	1	3	2	10
NO ANSWER	58	19	8	20	15	27	11	21	11	18	6	12	3	9	4	19
TOTAL	416	134	54	133	71	128	72	136	84	138	65	131	43	129	27	130

Table 3-1

3. ON THE AVERAGE, ABOUT HOW MANY HOURS IS ONE OF YOUR PATROLCARS IN USE DURING A TYPICAL DAY?

RESPONSE	DEPARTMENT TYPE													
	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
UNDER 4 HOURS	9	2	0	0	5	7	4	5	0	0	0	0	0	0	0	0
4-8 HOURS	42	9	12	26	21	29	2	2	3	3	0	0	0	0	4	14
9-16 HOURS	142	32	32	68	34	47	25	30	16	18	16	19	9	20	10	34
17-24 HOURS	255	57	3	6	12	17	51	62	71	79	66	80	37	80	15	52
NO ANSWER	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
TOTAL	449	100	47	100	72	100	82	100	90	100	83	100	46	100	29	100

Table 4-1

4. ON THE AVERAGE, HOW MANY DIFFERENT OFFICERS DRIVE ONE PATROLCAR IN A DAY?

RESPONSE	DEPARTMENT TYPE													
	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
ONE	84	19	31	66	37	51	10	12	0	0	1	1	2	4	3	10
TWO	65	14	13	28	18	25	16	20	4	4	8	10	1	2	5	17
THREE	200	45	2	4	13	18	37	45	55	61	53	64	24	52	16	55
MORE THAN THREE	101	22	1	2	5	7	19	23	31	34	22	27	19	41	4	14
NO ANSWER	2	0	0	0	1	1	0	0	0	0	0	0	0	0	1	3
TOTAL	449	100	47	100	72	100	82	100	90	100	83	100	46	100	29	100

Table 5-1

5. HOW LONG IS AN OFFICERS SHIFT IN YOUR DEPARTMENT?

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
UNDER 4 HOURS	2	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0
4-8 HOURS	310	69	17	36	33	46	50	61	82	91	71	86	36	78	21	72
9-12 HOURS	112	25	29	62	22	31	28	34	8	9	12	14	9	20	4	14
OVER 12 HOURS	23	5	1	2	16	22	3	4	0	0	0	0	0	0	3	10
NO ANSWER	2	0	0	0	1	1	0	0	0	0	0	0	0	0	1	3
TOTAL	449	100	47	100	72	100	82	100	90	100	83	100	46	100	29	100

Table 6-1

6. WHAT DETERMINES WHEN YOUR DEPARTMENTS PATROLCARS ARE REPLACED?

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
MILAGE	272	61	44	94	49	68	32	39	52	58	46	55	34	74	15	52
YEARS OF USE	286	64	22	47	47	65	66	80	56	62	48	58	29	63	18	62
OTHER	175	39	21	45	29	40	27	33	20	22	37	45	27	59	14	48
NO ANSWER	3	1	0	0	0	0	0	0	2	2	1	1	0	0	0	0
TOTAL	736	165	87	186	125	173	125	152	130	144	132	159	90	196	47	162

Table 6-3

IF MILAGE (YES TO QUESTION 6A) DETERMINES WHEN PATROLCARS ARE REPLACED; WHICH MILAGE?

RESPONSE	DEPARTMENT TYPE													
	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
UNDER 20,000 MILES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20,000-40,000 MILES	5	2	0	0	0	0	0	0	2	4	0	0	1	3	2	13
40,000-60,000 MILES	87	32	16	36	6	12	12	37	22	42	20	43	9	26	2	13
OVER 60,000 MILES	176	65	28	64	41	84	19	59	27	52	26	57	24	71	11	73
NO ANSWER	4	1	0	0	2	4	1	3	1	2	0	0	0	0	0	0
TOTAL	272	100	44	100	49	100	32	100	52	100	46	100	34	100	15	100

Table 6-4

IF YEARS OF USE (YES TO QUESTION 6B) DETERMINES WHEN PATROLCARS ARE REPLACED; HOW MANY YEARS OF USE?

RESPONSE	DEPARTMENT TYPE													
	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
ONE YEAR	77	27	1	5	2	4	16	24	30	54	17	35	3	10	8	44
TWO YEARS	115	40	10	45	17	36	26	39	22	39	22	46	11	38	7	39
THREE YEARS	60	21	8	36	16	34	17	26	3	5	5	10	8	28	3	17
OVER THREE YEARS	30	10	3	14	10	21	7	11	1	2	2	4	7	24	0	0
NO ANSWER	5	2	0	0	2	4	0	0	0	0	2	4	1	3	0	0
TOTAL	286	100	22	100	47	100	66	100	56	100	48	100	29	100	18	100

Table 6-5

IF SOMETHING OTHER THAN MILAGE OR YEARS OF USE (YES TO QUESTION 6C) DETERMINES WHEN PATROLCARS ARE REPLACED: WHAT ELSE?

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
AGE/MILAGE COMBINATION	16	9	2	10	0	0	0	0	2	10	4	11	6	22	2	14
GENERAL CONDITION OF CAR	59	34	5	24	11	38	8	30	6	30	15	41	11	41	3	21
MAJOR ACCIDENT	28	16	4	19	3	10	4	15	4	20	7	19	4	15	2	14
BUDGET/ADMINIS. POLICY	49	28	6	29	8	28	6	22	7	35	13	35	5	19	4	29
REPAIR/MAINT. COST TOO HIGH	41	23	8	38	9	31	7	26	5	25	6	16	2	7	4	29
SPECIFIC JOB FOR WHICH PATROLCAR IS USED	12	7	1	5	1	3	1	4	2	10	4	11	3	11	0	0
RENT OR LEASE FOR SPECIFIED TIME	2	1	0	0	0	0	1	4	1	5	0	0	0	0	0	0
REPLACE ON ALTERNATE YEARS	10	6	0	0	0	0	3	11	2	10	2	5	2	7	1	7
OTHER	15	9	3	14	4	14	2	7	0	0	1	3	2	7	3	21
NO ANSWER	1	1	0	0	0	0	0	0	0	0	0	0	1	4	0	0
TOTAL	233	134	29	139	36	124	32	119	29	145	52	141	36	133	19	135

Table 7-1

7. ABOUT WHAT PERCENT OF ALL THE MILES DRIVEN BY ALL THE PATROLCARS IN USE IN YOUR DEPARTMENT IS AT EACH OF THE FOLLOWING SPEEDS?

RESPONSE	DEPARTMENT TYPE							
	ALL DEPARTMENT TYPES	STATE	COUNTY	CITY (1-9 OFFICERS)	CITY (10-49 OFFICERS)	CITY (50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
	AVERAGE PERCENT	AVERAGE PERCENT	AVERAGE PERCENT	AVERAGE PERCENT	AVERAGE PERCENT	AVERAGE PERCENT	AVERAGE PERCENT	AVERAGE PERCENT
25-30 MPH: MANY STOPS	43.58	4.13	12.75	59.31	59.12	62.51	53.67	22.55
30-50 MPH: MANY STOPS	23.67	9.83	21.62	24.52	22.19	25.58	28.41	40.52
35-50 MPH: FEW STOPS	11.60	22.30	18.58	5.61	8.13	6.04	8.15	25.48
50-70 MPH	15.20	50.79	37.38	4.77	5.52	3.96	6.00	7.93
OVER 70 MPH	3.80	12.51	7.44	1.74	2.06	1.36	1.57	2.28
OTHER	1.34	.45	.07	2.87	1.67	.52	2.41	1.21
NO ANSWER	5	0	1	2	0	2	0	0

41 RESPONDENTS HAD 999 CODE

Table 8A-1

8.A. PLEASE TELL US HOW WELL YOUR PATROLCARS USUALLY PERFORM WITH REGARD TO CONTROL AND HANDLING AT EACH OF THE FOLLOWING SPEEDS:

UNDER 30 MILES PER HOUR, CONTROL AND HANDLING IS:

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
EXCELLENT	249	55	33	70	33	46	45	55	47	52	49	59	21	46	21	72
SATISFACTORY	189	42	13	28	35	49	34	41	42	47	34	41	25	54	6	21
POOR	2	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0
NO ANSWER/NOT APPLICABLE	9	2	1	2	4	6	2	2	0	0	0	0	0	0	2	7
TOTAL	449	100	47	100	72	100	82	100	90	100	83	100	46	100	29	100

30-70 MILES PER HOUR, CONTROL AND HANDLING IS:

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
EXCELLENT	118	26	22	47	19	26	23	28	19	21	15	18	8	17	12	41
SATISFACTORY	308	69	25	53	49	68	54	66	65	72	64	77	36	78	15	52
POOR	18	4	0	0	4	6	3	4	5	6	3	4	2	4	1	3
NO ANSWER/NOT APPLICABLE	5	1	0	0	0	0	2	2	1	1	1	1	0	0	1	3
TOTAL	449	100	47	100	72	100	82	100	90	100	83	100	46	100	29	100

OVER 70 MILES PER HOUR, CONTROL AND HANDLING IS:

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
EXCELLENT	43	10	5	11	11	15	8	10	7	8	4	5	3	7	5	17
SATISFACTORY	268	60	38	81	41	57	50	61	54	60	46	55	27	59	12	41
POOR	111	25	3	6	14	19	20	24	25	28	30	36	12	26	7	24
NO ANSWER/NOT APPLICABLE	27	6	1	2	6	8	4	5	4	4	3	4	4	9	5	17
TOTAL	449	100	47	100	72	100	82	100	90	100	83	100	46	100	29	100

Table 88-1

8.B. PLEASE TELL US HOW WELL YOUR PATROLCARS USUALLY PERFORM WITH REGARD TO BRAKING AT EACH OF THE FOLLOWING SPEEDS:

UNDER 30 MILES PER HOUR, BRAKING IS:

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
EXCELLENT	267	59	36	77	40	56	53	65	50	56	48	58	20	43	20	69
SATISFACTORY	170	38	10	21	26	36	28	34	39	43	34	41	26	57	7	24
POOR	4	1	0	0	2	3	0	0	1	1	1	1	0	0	0	0
NO ANSWER/NOT APPLICABLE	8	2	1	2	4	6	1	1	0	0	0	0	0	0	2	7
TOTAL	449	100	47	100	72	100	82	100	90	100	83	100	46	100	29	100

30-70 MILES PER HOUR, BRAKING IS:

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
EXCELLENT	117	26	20	43	26	36	24	29	17	19	13	16	7	15	10	34
SATISFACTORY	306	68	27	57	43	60	54	66	67	74	64	77	34	74	17	59
POOR	21	5	0	0	3	4	2	2	5	6	5	6	5	11	1	3
NO ANSWER/NOT APPLICABLE	5	1	0	0	0	0	2	2	1	1	1	1	0	0	1	3
TOTAL	449	100	47	100	72	100	82	100	90	100	83	100	46	100	29	100

OVER 70 MILES PER HOUR, BRAKING IS:

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
EXCELLENT	47	10	3	6	17	24	7	9	9	10	6	7	2	4	3	10
SATISFACTORY	242	54	31	66	36	50	52	63	48	53	39	47	22	48	14	48
POOR	137	31	12	26	14	19	20	24	29	32	36	43	18	39	8	28
NO ANSWER/NOT APPLICABLE	23	5	1	2	5	7	3	4	4	4	2	2	4	9	4	14
TOTAL	449	100	47	100	72	100	82	100	90	100	83	100	46	100	29	100

Table 9A-1

9.A. ON THE AVERAGE, HOW LONG DOES IT TAKE AN OFFICER TO BECOME ACCUSTOMED TO THE CONTROLS AND INSTRUMENTS OF A NEW PATROLCAR?

RESPONSE	DEPARTMENT TYPE															
	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
LESS THAN A DAY	186	41	11	23	22	31	30	37	41	46	47	57	24	52	11	38
2-7 DAYS	227	51	29	62	41	57	45	55	42	47	34	41	19	41	17	59
8-30 DAYS	30	7	7	15	6	8	6	7	6	7	2	2	3	7	0	0
MORE THAN A MONTH	3	1	0	0	1	1	1	1	1	1	0	0	0	0	0	0
NO ANSWER	3	1	0	0	2	3	0	0	0	0	0	0	0	0	1	3
TOTAL	449	100	47	100	72	100	82	100	90	100	83	100	46	100	29	100

Table 9B-1

9.B. ON THE AVERAGE, HOW LONG DOES IT TAKE AN OFFICER TO BECOME ACCUSTOMED TO THE HANDLING AND PERFORMANCE OF A NEW PATROLCAR?

RESPONSE	DEPARTMENT TYPE															
	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
LESS THAN A DAY	91	20	4	9	15	21	11	13	19	21	27	33	11	24	4	14
2-7 DAYS	244	54	27	57	35	49	49	60	45	50	44	53	27	59	17	59
8-30 DAYS	88	20	12	26	16	22	15	18	20	22	12	14	6	13	7	24
MORE THAN A MONTH	9	2	2	4	0	0	3	4	2	2	0	0	2	4	0	0
NO ANSWER	17	4	2	4	6	8	4	5	4	4	0	0	0	0	1	3
TOTAL	449	100	47	100	72	100	82	100	90	100	83	100	46	100	29	100

Table 10-1

10. ABOUT HOW MANY MILES PER GALLON DO YOUR PATROLCARS GET?

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
LESS THAN 8 MILES/GALLON	94	21	3	6	5	7	14	17	20	22	31	37	16	35	5	17
8-11 MILES/GALLON	310	69	44	94	43	60	57	70	66	73	49	59	29	63	22	76
12-15 MILES/GALLON	43	10	0	0	23	32	11	13	3	3	3	4	1	2	2	7
MORE THAN 15 MILES/GALLON	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
NO ANSWER	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
TOTAL	449	100	47	100	72	100	82	100	90	100	83	100	46	100	29	100

Table 11A-1

11.A. WHEN YOUR NEW PATROLCARS COME FROM THE MANUFACTURER, WHAT CHANGES OR ADDITIONS ARE MADE FOR YOUR DEPARTMENT (EITHER BY YOU OR BY YOUR DEALER)?

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
INSTALL SIREN	438	98	45	96	69	96	82	100	88	98	82	99	45	98	27	93
REMOVE CHROME	2	0	0	0	0	0	0	0	0	0	1	1	0	0	1	3
SPECIAL ENGINE CHANGES	10	2	0	0	0	0	2	2	2	2	3	4	1	2	2	7
INSTALL SPOTLIGHTS	276	61	11	23	46	64	56	68	59	66	51	61	30	65	23	79
INSTALL MOUNTING RACKS	229	51	8	17	28	39	39	48	60	67	54	65	24	52	16	55
INSTALL BAR FLASHING LIGHTS	311	69	22	47	40	56	50	61	78	87	70	84	30	65	21	72
INSTALL BUBBLE LIGHT	243	54	29	62	34	47	48	59	39	43	42	51	33	72	18	62
INSTALL GUN RACKS	253	56	16	34	27	37	45	55	62	69	55	66	30	65	18	62
INSTALL TRUNK RACKS	169	38	12	26	19	26	27	33	42	47	37	45	17	37	15	52
INSTALL P.A. SYSTEM	338	75	35	74	46	64	49	60	75	83	70	84	39	85	24	83
INSTALL BARRIER BTWN SEATS	192	43	8	17	25	35	36	44	46	51	36	43	28	61	13	45
INSTALL MOBILE RADIO	438	98	46	98	68	94	81	99	88	98	82	99	45	98	28	97
OTHER	130	29	28	60	12	17	18	22	29	32	17	20	20	43	6	21
NO ANSWER/NONE	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
TOTAL	3030	674	260	554	415	576	533	651	668	743	600	722	342	743	212	731

11.B. WHAT PROBLEMS DO YOU HAVE MAKING THESE CHANGES TO THE MANUFACTURERS REGULAR MODEL?

EQUIPMENT ITEM MENTIONED:

RESPONSE	DEPARTMENT TYPE															
	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
RADIO EQUIP/CONTROLS	50	11	8	17	5	7	7	9	7	8	11	13	7	15	5	17
GUN RACK/MOUNTS	23	5	0	0	4	6	5	6	5	6	3	4	6	13	0	0
SIREN	24	5	10	21	0	0	2	2	5	6	3	4	3	7	1	3
BARRIER BTWN SEATS	21	5	1	2	6	8	5	6	4	4	4	5	1	2	0	0
SPOTLIGHT	18	4	2	4	5	7	3	4	3	3	2	2	0	0	3	10
BAR FLASHING LIGHTS	15	3	2	4	1	1	3	4	5	6	2	2	1	2	1	3
BUBBLE LIGHTS	6	1	1	2	1	1	3	4	0	0	0	0	1	2	0	0
PA SYSTEM	8	2	1	2	0	0	1	1	0	0	4	5	1	2	1	3
ITEMS UNDER HOOD	11	2	2	4	1	1	0	0	2	2	3	4	3	7	0	0
MISCELLANEOUS	8	2	3	6	1	1	1	1	1	1	2	2	0	0	0	0
NO ANSWER/NONE SPECIFIED	332	74	24	51	54	75	65	79	73	81	61	73	33	72	22	76
TOTAL	516	114	54	113	78	107	95	116	105	117	95	114	56	122	33	112

Table 11 B-1

11.B. WHAT PROBLEMS DO YOU HAVE MAKING THESE CHANGES TO THE MANUFACTURERS REGULAR MODEL?

EQUIPMENT PROBLEM:

RESPONSE	DEPARTMENT TYPE																	
	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
SLIGHT PROB.:UNSPECIFIED	25	6	1	2	5	7	6	7	4	4	6	7	2	4	1	3
COST/TIME/DEPRECIATION	44	10	4	9	3	4	9	11	9	10	9	11	6	13	4	14
YEAR-TO-YEAR DESIGN/ MODEL CHANGES	49	11	3	6	9	12	4	5	11	12	16	19	6	13	0	0
LACK OF ROOM/APPRO. PLACE TO INSTALL/MOUNT	75	17	15	32	11	15	9	11	14	16	12	14	10	22	4	14
LACK OF APPRO. SUPPORT TO INSTALL/MOUNT	28	6	4	9	5	7	5	6	6	7	2	2	4	9	2	7
AVAILABILITY OF MECHANICS	6	1	0	0	1	1	1	1	1	1	2	2	1	2	0	0
WIRING PROBLEMS	25	6	0	0	4	6	4	5	4	4	7	8	3	7	3	10
MUST MODIFY/BUY EQUIPMENT OR MODIFY CAR TO INSTALL	57	13	7	15	7	10	10	12	13	14	10	12	8	17	2	7
OTHER	21	5	2	4	4	6	3	4	4	4	3	4	3	7	2	7
NONE/NO PROBLEMS	134	30	13	28	18	25	27	33	25	28	28	34	14	30	9	31
NO ANSWER	59	13	5	11	14	19	14	17	15	17	5	6	0	0	6	21
TOTAL	523	118	54	116	81	112	92	112	106	117	100	119	57	124	33	114

Table 12-1

12. WHICH OF THE FOLLOWING OPTIONS WERE INCLUDED THE LAST TIME YOUR DEPARTMENT BOUGHT PATROLCARS?

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
POWER BRAKES	384	86	45	96	59	82	66	80	79	88	70	84	41	89	24	83
AUTOMATIC TRANSMISSION	426	95	46	98	63	87	78	95	88	98	79	95	46	100	26	90
BULLET-PROOF GLASS	2	0	0	0	0	0	0	0	0	0	0	0	1	2	1	3
LIGHT IN TRUNK	200	45	31	66	33	46	36	44	38	42	31	37	14	30	17	59
INTERIOR TRUNK RELEASE	164	37	28	60	23	32	17	21	34	38	30	36	14	30	18	62
INTERIOR HOOD RELEASE	218	49	38	81	34	47	30	37	39	43	35	42	29	63	13	45
LOCKING GAS CAP	47	10	8	17	6	8	7	9	7	8	6	7	13	28	0	0
EIGHT-CYLINDER ENGINE	420	94	46	98	61	85	78	95	85	94	77	93	46	100	27	93
HEAVY DUTY SUSPENSION	373	83	46	98	49	68	62	76	78	87	70	84	42	91	26	90
AIR CONDITIONING	267	59	38	81	38	53	35	43	53	59	59	71	29	63	15	52
BUCKET SEATS	19	4	1	2	3	4	2	2	3	3	3	4	7	15	0	0
TINTED GLASS	235	52	33	70	28	39	34	41	46	51	56	67	25	54	13	45
POWER STEERING	402	90	43	91	57	79	70	85	85	94	79	95	41	89	27	93
DISC BRAKES	379	84	46	98	57	79	63	77	74	82	71	86	44	96	24	83
OTHER	135	30	26	55	14	19	13	16	24	27	26	31	23	50	9	31
NO ANSWER	4	1	0	0	4	6	0	0	0	0	0	0	0	0	0	0
TOTAL	3675	819	475	***	529	734	591	721	733	814	692	832	415	900	240	829

Table 13-1

13. ABOUT HOW MUCH DOES A NEW PATROLCAR COST WITHOUT TRADE-IN? (INCLUDE COSTS FOR CHANGES, SPECIFIED BY YOU, WHICH THE DEALER MAKES.)

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
UNDER $2500	10	2	0	0	3	4	1	1	2	2	3	4	0	0	1	3
$2500-$2999	44	10	0	0	8	11	9	11	7	8	7	8	10	22	3	10
$3000-$3499	176	39	23	49	22	31	24	29	42	47	37	45	23	50	5	17
$3500-$3999	147	33	20	43	17	24	33	40	23	26	30	36	11	24	13	45
$4000-$4499	41	9	4	9	7	10	12	15	9	10	3	4	1	2	5	17
$4500-$4999	17	4	0	0	5	7	3	4	5	6	1	1	1	2	2	7
$5000 OR MORE	4	1	0	0	4	6	0	0	0	0	0	0	0	0	0	0
NO ANSWER	11	2	0	0	6	8	0	0	2	2	2	2	1	2	0	0
TOTAL	449	100	47	100	72	100	82	100	90	100	83	100	46	100	29	100

Table 14-1

14. WHAT EQUIPMENT IS NORMALLY CARRIED IN YOUR PATROLCARS? (X EACH ITEM THAT IS CARRIED IN NEARLY EVERY PATROLCAR)

RESPONSE	DEPARTMENT TYPE															
	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
HAND-HELD RADIO	135	30	3	6	15	21	25	30	27	30	35	42	17	37	13	45
SHOTGUN	329	73	36	77	57	79	59	72	68	76	57	69	32	70	20	69
FLARES	364	81	43	91	58	81	71	87	69	77	63	76	31	67	29	100
FIRST AID KIT	356	79	46	98	55	76	68	83	72	80	59	71	30	65	26	90
EXTRA AMMUNITION	245	55	36	77	52	72	50	61	48	53	26	31	17	37	16	55
BATONS	300	67	40	85	45	62	61	74	49	54	51	61	33	72	21	72
CAMERA AND FILM	144	32	26	55	34	47	24	29	28	31	14	17	6	13	12	41
CLIPBOARD	375	84	40	85	62	86	78	95	75	83	60	72	32	70	28	97
BRIEFCASE	238	53	21	45	45	62	46	56	41	46	44	53	21	46	20	69
FIRE EXTINGUISHER	372	83	45	96	58	81	62	76	77	86	69	83	32	70	29	100
BLANKETS	288	64	36	77	47	65	44	54	66	73	54	65	20	43	21	72
FINGERPRINT KITS	85	19	5	11	27	37	16	20	16	18	11	13	7	15	3	10
FIELD DETECTION KITS	28	6	8	17	4	6	4	5	6	7	2	2	3	7	1	3
RIOT EQUIPMENT	124	28	36	77	17	24	15	18	14	16	23	28	11	24	8	28
OTHER	129	29	27	57	13	18	23	28	21	23	18	22	15	33	12	41
NO ANSWER	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
TOTAL	3513	783	448	954	590	818	646	788	677	753	586	705	307	669	259	892

Table 14 A-1

14.A. WHAT PROBLEMS HAVE YOU HAD, IF ANY, STORING IN THE CAR THE EQUIPMENT THAT IS USUALLY CARRIED IN YOUR PATROLCARS? (NAME THE ITEM OF EQUIPMENT AND DESCRIBE THE PROBLEM IN THE SPACES PROVIDED)

EQUIPMENT ITEMS NAMED AS BEING ASSOCIATED WITH STORAGE PROBLEMS:

RESPONSE	DEPARTMENT TYPE																	
	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
EQUIPMENT IN GENERAL	7	2	1	2	1	1	0	0	1	1	3	4	1	2	0	0
HAND-HELD RADIO	6	1	0	0	0	0	1	1	2	2	1	1	2	4	0	0
SHOTGUN	70	16	4	9	3	4	9	11	24	27	21	25	7	15	2	7
FLARES	26	6	1	2	2	3	4	5	7	8	8	10	3	7	1	3
FIRST AID KIT	31	7	1	2	4	6	3	4	6	7	11	13	2	4	4	14
EXTRA AMMUNITION	4	1	1	2	0	0	1	1	1	1	1	1	0	0	0	0
BATONS	10	2	0	0	2	3	1	1	4	4	1	1	2	4	0	0
CAMERA AND FILM	11	2	0	0	2	3	3	4	3	3	1	1	2	4	0	0
CLIPBOARD	9	2	1	2	0	0	1	1	3	3	2	2	1	2	1	3
BRIEFCASE	4	1	0	0	0	0	0	0	0	0	3	4	1	2	0	0
FIRE EXTINGUISHER	21	5	2	4	1	1	4	5	5	6	3	4	4	9	2	7
BLANKETS	13	3	0	0	1	1	1	1	6	7	3	4	0	0	2	7
FINGERPRINT KITS	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
FIELD DETECTION KITS	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0
RIOT EQUIPMENT	4	1	0	0	0	0	0	0	0	0	3	4	1	2	0	0
TRUNK ITEMS IN GENERAL	28	6	3	6	4	6	7	9	4	4	6	7	3	7	1	3
REPORT BOX	2	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0
COMMUNICATIONS EQUIP	17	4	1	2	4	6	0	0	1	1	9	11	1	2	1	3
OXYGEN TANKS	6	1	0	0	1	1	2	2	2	2	0	0	0	0	1	3
FLASHLIGHT	5	1	2	4	0	0	0	0	0	0	1	1	1	2	1	3
DOG EQUIP IN GENERAL	3	1	0	0	1	1	2	2	0	0	0	0	0	0	0	0
RADAR EQUIPMENT	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0
STRETCHER	2	0	0	0	0	0	0	0	0	0	1	1	1	2	0	0
SPARE TIRE/MOUNTS	5	1	0	0	1	1	0	0	1	1	2	2	1	2	0	0
SIREN	6	1	2	4	2	3	1	1	0	0	0	0	0	0	1	3
TAPE MEASURE	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
BINOCULARS	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
BARRIER BETWEEN SEATS	2	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0
STORAGE BOX	7	2	1	2	1	1	2	2	2	2	0	0	1	2	0	0
EMERGENCY EQUIP IN GEN.	2	0	0	0	0	0	0	0	0	0	0	0	1	2	1	3
OTHER	19	4	3	6	0	0	4	5	3	3	4	5	4	9	1	3
NONE/NO PROBLEM	106	24	12	26	20	28	23	28	16	18	16	19	11	24	8	28
NO ANSWER	168	37	19	40	34	47	32	39	35	39	26	31	11	24	11	38
TOTAL	600	131	54	113	84	116	106	127	127	140	127	152	64	137	38	128

Table 14 A-2

14.A. WHAT PROBLEMS HAVE YOU HAD, IF ANY, STORING IN THE CAR THE EQUIPMENT THAT IS USUALLY CARRIED IN YOUR PATROLCARS? (NAME THE ITEM OF EQUIPMENT AND DESCRIBE THE PROBLEM IN THE SPACES PROVIDED)

PROBLEM MENTIONED:

RESPONSE	DEPARTMENT TYPE															
	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
DIFFICULT TO INSTALL/MOUNT: GENERAL	39	9	5	11	4	6	2	2	7	8	16	19	4	9	1	3
NOT ENOUGH SUPPORT TO INSTALL/MOUNT	11	2	0	0	0	0	3	4	4	4	3	4	1	2	0	0
NO APPRO. PLACE TO STORE THAT IS ALSO ACCESIBLE	25	6	4	9	1	1	1	1	10	11	4	5	5	11	0	0
YEAR-TO-YEAR DESIGN/MODEL CHANGES	11	2	1	2	0	0	2	2	3	3	4	5	1	2	0	0
GETS DIRTY OR DAMP	71	16	1	2	11	15	12	15	18	20	17	20	4	9	8	28
THREATENS SAFETY	4	1	0	0	0	0	0	0	1	1	2	2	1	2	0	0
NOT ENOUGH ROOM TO STORE IN PLACE DESIRED	61	14	5	11	4	6	11	13	10	11	14	17	11	24	6	21
NO APPROPRIATE PLACE TO STORE (GENERAL)	83	18	7	15	10	14	18	22	13	14	22	27	10	22	3	10
EQUIP. PROB. NOT STORAGE	11	2	1	2	0	0	1	1	6	7	3	4	0	0	0	0
OTHER	8	2	0	0	0	0	1	1	2	2	0	0	4	9	1	3
PROBLEM UNSPECIFIED	3	1	0	0	0	0	0	0	2	2	0	0	1	2	0	0
NONE/NO PROBLEM	106	24	12	26	20	28	23	28	16	18	16	19	11	24	8	28
NO ANSWER	167	37	18	38	34	47	32	39	35	39	26	31	11	24	11	38
TOTAL	600	134	54	116	84	117	106	128	127	140	127	153	64	140	38	131

Table 14 A-3

14.A. WHAT PROBLEMS HAVE YOU HAD, IF ANY, STORING IN THE CAR THE EQUIPMENT THAT IS USUALLY CARRIED IN YOUR PATROLCARS? (NAME THE ITEM OF EQUIPMENT AND DESCRIBE THE PROBLEM IN THE SPACES PROVIDED)

EQUIPMENT ITEM	EQUIPMENT STORAGE PROBLEM*																									
	A		B		C		D		E		F		G		H		I		J		K		L		M	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
EQUIPMENT IN GENERAL	2	0	0	0	0	0	0	0	2	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0
HAND-HELD RADIO	0	0	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0
SHOTGUN	11	2	6	1	11	2	6	1	8	2	3	1	10	2	14	3	1	0	0	0	0	0	0	0	0	0
FLARES	4	1	1	0	0	0	1	0	12	3	0	0	0	0	7	2	0	0	0	0	1	0	0	0	0	0
FIRST AID KIT	2	0	0	0	1	0	0	0	12	3	0	0	4	1	8	2	2	0	2	0	0	0	0	0	0	0
EXTRA AMMUNITION	0	0	0	0	0	0	0	0	0	0	0	0	3	1	1	0	0	0	0	0	0	0	0	0	0	0
BATONS	1	0	0	0	2	0	0	0	0	0	0	0	1	0	6	1	0	0	0	0	0	0	0	0	0	0
CAMERA AND FILM	2	0	0	0	2	0	0	0	1	0	0	0	1	0	3	1	1	0	1	0	0	0	0	0	0	0
CLIPBOARD	0	0	0	0	0	0	0	0	0	0	1	0	2	0	5	1	1	0	0	0	0	0	0	0	0	0
BRIEFCASE	1	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0
FIRE EXTINGUISHER	3	1	1	0	4	1	0	0	1	0	0	0	2	0	5	1	2	0	3	1	0	0	0	0	0	0
BLANKETS	0	0	0	0	0	0	0	0	10	2	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0
FINGERPRINT KITS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
FIELD DETECTION KITS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
RIOT EQUIPMENT	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUNK ITEMS IN GENERAL	2	0	0	0	0	0	0	0	14	3	0	0	2	0	9	2	1	0	0	0	0	0	0	0	0	0
REPORT BOX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
COMMUNICATIONS EQUIP	3	1	2	0	0	0	1	0	2	0	0	0	6	1	3	1	0	0	0	0	0	0	0	0	0	0
OXYGEN TANKS	0	0	0	0	0	0	0	0	4	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
FLASHLIGHT	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0
DOG EQUIP IN GENERAL	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
RADAR EQUIPMENT	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
STRETCHER	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPARE TIRE/MOUNTS	1	0	0	0	1	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0
SIREN	1	0	0	0	0	0	1	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0
TAPE MEASURE	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
BINOCULARS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
BARRIER BETWEEN SEATS	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
STORAGE BOX	2	0	0	0	0	0	1	0	0	0	0	0	3	1	0	0	0	0	0	0	1	0	0	0	0	0
EMERGENCY EQUIP IN GEN.	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	1	0	1	0	0	0	2	0	0	0	8	2	4	1	2	0	1	0	0	0	0	0	0	0
NONE/NO PROBLEM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106	24	0	0
NO ANSWER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	167	37

*A. DIFFICULT TO INSTALL/MOUNT (GENERAL)
B. NOT ENOUGH SUPPORT TO INSTALL/MOUNT
C. NO APPRO. PLACE TO STORE THAT IS ALSO ACCESSIBLE
D. YEAR-TO-YEAR DESIGN/MODEL CHANGES
E. GETS DIRTY OR DAMP
F. THREATENS SAFETY
G. NOT ENOUGH ROOM TO STORE IN PLACE DESIRED
H. NO APPROPRIATE PLACE TO STORE (GENERAL)
I. EQUIP. PROB. NOT STORAGE
J. OTHER
K. PROBLEM UNSPECIFIED
L. NONE/NO PROBLEM
M. NO ANSWER

Table 15-1

15. WHICH OF THE FOLLOWING FEATURES DO YOU THINK SHOULD BE ON ALL OF YOUR PATROLCARS? (CHECK EACH ITEM THAT APPLIES REGARDLESS OF WHETHER YOU KNOW IT IS NOW AVAILABLE OR NOT)

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
AIR CONDITIONING	383	85	43	91	61	85	67	82	76	84	74	89	39	85	23	79
TINTED GLASS	373	83	42	89	56	78	66	80	76	84	71	86	37	80	25	86
ADDITIONAL HEADROOM	281	63	33	70	38	53	46	56	57	63	58	70	30	65	19	66
ADDITIONAL LEGROOM	199	44	23	49	22	31	33	40	46	51	38	46	23	50	14	48
BUCKET SEATS W/ CONSOLE	168	37	11	23	15	21	32	39	37	41	41	49	19	41	13	45
BETTER VENT. UPHOLSTERY	320	71	29	62	39	54	55	67	75	83	64	77	38	83	20	69
MORE DURABLE SEAT SPRINGS	325	72	33	70	39	54	61	74	68	76	66	80	36	78	22	76
FOLD-OUT DESK IN FRONT	167	37	9	19	21	29	37	45	41	46	31	37	14	30	14	48
COMMUNICATIONS CONSOLE	309	69	26	55	44	61	54	66	73	81	63	76	29	63	20	69
LARGER GLOVE COMPARTMENT	178	40	22	47	31	43	32	39	38	42	27	33	16	35	12	41
BARRIER BETWEEN SEATS	325	72	17	36	49	68	72	88	71	79	59	71	33	72	24	83
BUILT-IN SHELVES IN TRUNK	252	56	15	32	29	40	56	68	64	71	48	58	16	35	24	83
NOISE SOUNDPROOFING	149	33	18	38	18	25	32	39	32	36	27	33	12	26	10	34
BUILT-IN MOUNTING BRACKETS	280	62	16	34	37	51	57	70	69	77	57	69	23	50	21	72
BULLET-PROOF GLASS	172	38	8	17	25	35	40	49	37	41	29	35	18	39	15	52
INTERIOR MAP LAMP	339	76	36	77	47	65	65	79	67	74	65	78	36	78	23	79
BUILT-IN CRASH BARS	313	70	29	62	47	65	58	71	69	77	59	71	31	67	20	69
LOCKING GAS CAP	226	50	26	55	29	40	40	49	50	56	37	45	31	67	13	45
BUMPERS WITH PUSH BARS	259	58	30	64	35	49	42	51	57	63	51	61	28	61	16	55
360 DEGREE OBSRV. MIRRORS	285	63	27	57	42	58	57	70	71	79	49	59	21	46	18	62
TRUNK/HOOD RELEASES INSIDE	382	85	40	85	54	75	67	82	78	87	75	90	41	89	27	93
CENTRAL DOOR LOCK	317	71	29	62	45	62	59	72	73	81	58	70	28	61	25	86
HEAVY DUTY SUSPENSION	420	94	46	98	64	89	78	95	84	93	78	94	42	91	28	97
OTHER	98	22	13	28	11	15	12	15	24	27	16	19	17	37	5	17
NO ANSWER	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
TOTAL	10034	***	1069	***	1489	***	1864	***	2110	***	1827	***	965	***	710	***

Table 15A-1

15.A. WHICH THREE OF THE ABOVE FEATURES (ITEMS CHECKED IN QUESTION 15) WOULD BE MOST IMPORTANT TO HAVE IN ALL YOUR PATROLCARS?

RESPONSE	DEPARTMENT TYPE																	
	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
AIR CONDITIONING	190	42	29	62	29	40	35	43	38	42	29	35	19	41	11	38
TINTED GLASS	14	3	2	4	6	8	2	2	1	1	0	0	2	4	1	3
ADDITIONAL HEADROOM	65	14	14	30	8	11	8	10	18	20	9	11	6	13	2	7
ADDITIONAL LEGROOM	24	5	3	6	2	3	2	2	6	7	7	8	2	4	2	7
BUCKET SEATS W/ CONSOLE	36	8	3	6	3	4	8	10	4	4	8	10	6	13	4	14
BETTER VENT. UPHOLSTERY	31	7	2	4	2	3	4	5	6	7	5	6	6	13	6	21
MORE DURABLE SEAT SPRINGS	32	7	2	4	1	1	4	5	8	9	9	11	4	9	4	14
FOLD-OUT DESK IN FRONT	12	3	0	0	1	1	3	4	1	1	5	6	2	4	0	0
COMMUNICATIONS CONSOLE	108	24	5	11	22	31	24	29	20	22	24	29	6	13	7	24
LARGER GLOVE COMPARTMENT	8	2	0	0	1	1	0	0	1	1	1	1	3	7	2	7
BARRIER BETWEEN SEATS	139	31	3	6	20	28	31	38	32	36	29	35	14	30	10	34
BUILT-IN SHELVES IN TRUNK	28	6	0	0	4	6	7	9	6	7	8	10	1	2	2	7
NOISE SOUNDPROOFING	5	1	1	2	1	1	2	2	0	0	1	1	0	0	0	0
BUILT-IN MOUNTING BRACKETS	32	7	4	9	4	6	8	10	8	9	3	4	3	7	2	7
BULLET-PROOF GLASS	47	10	0	0	6	8	11	13	13	14	9	11	3	7	5	17
INTERIOR MAP LAMP	4	1	0	0	1	1	2	2	0	0	1	1	0	0	0	0
BUILT-IN CRASH BARS	142	32	16	34	24	33	25	30	32	36	31	37	7	15	7	24
LOCKING GAS CAP	8	2	0	0	2	3	3	4	1	1	1	1	1	2	0	0
BUMPERS WITH PUSH BARS	27	6	6	13	5	7	2	2	4	4	8	10	2	4	0	0
360 DEGREE OBSRV. MIRRORS	27	6	2	4	3	4	5	6	9	10	5	6	1	2	2	7
TRUNK/HOOD RELEASES INSIDE	33	7	1	2	4	6	5	6	8	9	7	8	5	11	3	10
CENTRAL DOOR LOCK	44	10	2	4	10	14	7	9	13	14	9	11	1	2	2	7
HEAVY DUTY SUSPENSION	171	38	24	51	24	33	32	39	27	30	25	30	28	61	11	38
OTHER	55	12	10	21	8	11	5	6	6	7	9	11	13	28	4	14
NO ANSWER	13	3	2	4	6	8	3	4	1	1	1	1	0	0	0	0
TOTAL	1295	287	131	277	197	272	238	290	263	292	244	294	135	292	87	300

Table 16-1

16. WHAT IS THE AVERAGE DOWNTIME PER PATROLCAR PER MONTH FOR SERVICE AND REPAIR?

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
LESS THAN 3 DAYS/MONTH	280	62	34	72	54	75	62	76	46	51	44	53	17	37	23	79
3-5 DAYS PER MONTH	142	32	13	28	13	18	19	23	39	43	32	39	22	48	4	14
6-8 DAYS PER MONTH	21	5	0	0	3	4	1	1	4	4	7	8	5	11	1	3
9-11 DAYS PER MONTH	2	0	0	0	0	0	0	0	1	1	0	0	1	2	0	0
12-14 DAYS PER MONTH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORE THAN 14 DAYS/MONTH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO ANSWER	4	1	0	0	2	3	0	0	0	0	0	0	1	2	1	3
TOTAL	449	100	47	100	72	100	82	100	90	100	83	100	46	100	29	100

Table 17-1

17. LISTED BELOW ARE FOUR FACTORS THAT MAY BE CAUSES OF PATROLCAR DOWNTIME. LOOK OVER THE ENTIRE LIST, AND THEN PLACE AN X BY THE ITEM THAT MOST OFTEN CAUSES PATROLCAR DOWNTIME IN YOUR DEPARTMENT.

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
TIME TO ACTUALLY PERFORM THE SERVICE/REPAIR	102	23	7	15	15	21	16	20	21	23	19	23	7	15	17	59
FREQUENT NEED FOR SERVICE/REPAIR	109	24	10	21	12	17	22	27	31	34	21	25	10	22	3	10
DELAY IN GETTING PARTS	115	26	23	49	19	26	17	21	20	22	18	22	12	26	6	21
SHORTAGE OF MECHANICS/ REPAIRMEN (WORKLOAD)	134	30	8	17	24	33	24	29	20	22	35	42	20	43	3	10
OTHER	25	6	3	6	5	7	4	5	4	4	6	7	3	7	0	0
NO ANSWER	7	2	0	0	4	6	2	2	0	0	0	0	0	0	1	3
TOTAL	492	111	51	108	79	110	85	104	96	105	99	119	52	113	30	103

Table 18-1

18. IN WHAT THREE AREAS DOES THE MAJORITY OF YOUR PATROLCAR SERVICE/ REPAIR OCCUR. (DO NOT INCLUDE OIL CHANGES AND SCHEDULED TUNE-UPS.)

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
BODY WORK	109	24	9	19	12	17	7	9	16	18	32	39	27	59	6	21
BRAKE SYSTEM	228	51	19	40	26	36	34	41	53	59	52	63	34	74	10	34
STANDARD TRANSMISSION SYS.	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
AUTO. TRANSMISSION SYSTEM	116	26	16	34	12	17	20	24	16	18	26	31	20	43	6	21
REPLACEMENT OF TIRES	203	45	11	23	45	62	51	62	53	59	21	25	3	7	19	66
FRONT END ALIGNMENT	170	38	12	26	45	62	25	30	33	37	27	33	12	26	16	55
SERVICE OF AIR CONDITIONING	26	6	6	13	2	3	1	1	5	6	7	8	5	11	0	0
ELECTRICAL SYSTEM	128	29	20	43	12	17	25	30	24	27	26	31	16	35	5	17
AUXILIARY ELECTRICAL EQUIP.	39	9	0	0	4	6	8	10	10	11	9	11	2	4	6	21
REAR END MAINTENANCE	7	2	3	6	0	0	3	4	1	1	0	0	0	0	0	0
ENGINE	250	56	41	87	34	47	47	57	48	53	49	59	16	35	15	52
OTHER	28	6	2	4	4	6	8	10	7	8	3	4	3	7	1	3
NO ANSWER	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
TOTAL	1306	292	139	295	198	275	229	278	266	297	252	304	138	301	84	290

Table 19-1

19. WHAT FEATURE OF YOUR PRESENT PATROLCARS DO YOU CONSIDER DANGEROUS TO THE OCCUPANTS, AND HOW ARE THEY DANGEROUS? (NAME THE PATROLCAR FEATURES AND DESCRIBE THE DANGER IN THE SPACES PROVIDED BELOW)

DANGEROUS FEATURE:

RESPONSE	DEPARTMENT TYPE																	
	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
BRAKE SYSTEM	70	16	6	13	6	8	8	10	22	24	16	19	6	13	6	21
RESTRAINT SYSTEM(S)	28	6	3	6	7	10	4	5	3	3	6	7	3	7	2	7
SHOTGUN MOUNT/HOLDER/RACK	15	3	1	2	1	1	1	1	2	2	3	4	7	15	0	0
TIRES	14	3	0	0	0	0	3	4	4	4	3	4	2	4	2	7
AUXILIARY FRONT SEAT EQUIP	28	6	0	0	4	6	4	5	5	6	11	13	3	7	1	3
LACK CRASH BARS/ROOF SUPPRT	12	3	1	2	1	1	2	2	2	2	2	2	1	2	3	10
BUMPERS	8	2	0	0	0	0	0	0	2	2	1	1	2	4	3	10
LACK OF BARRIER BTWN SEATS	23	5	0	0	3	4	5	6	4	4	5	6	4	9	2	7
BODY CONSTRUC/STRENGTH	33	7	3	6	4	6	4	5	11	12	6	7	4	9	1	3
SUSPENSION SYS. (FT & REAR)	39	9	0	0	5	7	5	6	9	10	4	5	11	24	5	17
ENGINE PERFORMANCE	20	4	3	6	2	3	3	4	4	4	3	4	4	9	1	3
DOORS/DOOR LOCKS	19	4	0	0	2	3	4	5	7	8	4	5	2	4	0	0
INSUFFICIENT HEADRM/LEGRM	9	2	0	0	1	1	0	0	2	2	1	1	2	4	3	10
SEATS (FRONT AND REAR)	11	2	2	4	0	0	0	0	3	3	1	1	5	11	0	0
WINDSHIELD/WINDOWS	14	3	1	2	1	1	1	1	4	4	3	4	3	7	1	3
TRANSMISSION SYSTEM	4	1	0	0	0	0	0	0	1	1	2	2	0	0	1	3
DESIGN PROB. (GENERAL)	8	2	3	6	1	1	2	2	2	2	0	0	0	0	0	0
REAR VIEW MIRROR/CORNR POST	10	2	0	0	0	0	1	1	6	7	1	1	2	4	0	0
EXHAUST SYSTEM/VENTILATION	8	2	0	0	0	0	3	4	2	2	0	0	1	2	2	7
STEERING WHEEL/COLUMN	4	1	0	0	0	0	0	0	2	2	2	2	0	0	0	0
SPOTLIGHT	5	1	1	2	2	3	0	0	0	0	1	1	1	2	0	0
RADIO MOUNT/CONTROLS	4	1	0	0	1	1	0	0	0	0	2	2	1	2	0	0
FENDER OVERHANG (FT & REAR)	2	0	1	2	0	0	0	0	0	0	0	0	1	2	0	0
LIGHT WEIGHT	7	2	0	0	0	0	2	2	0	0	2	2	2	4	1	3
WIRING	3	1	0	0	0	0	0	0	1	1	1	1	0	0	1	3
COMMENT, NOT FEATURE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MISCELLANEOUS	52	12	5	11	1	1	9	11	14	16	13	16	8	17	2	7
NO PROBLEMS/NONE	61	14	9	19	13	18	11	13	11	12	6	7	7	15	4	14
NO ANSWER	172	38	21	45	32	44	36	44	31	34	29	35	12	26	11	38
TOTAL	683	152	60	126	87	119	108	131	154	167	128	152	94	203	52	176

Table 19-2

19. WHAT FEATURE OF YOUR PRESENT PATROLCARS DO YOU CONSIDER DANGEROUS TO THE OCCUPANTS, AND HOW ARE THEY DANGEROUS? (NAME THE PATROLCAR FEATURES AND DESCRIBE THE DANGER IN THE SPACES PROVIDED BELOW)

HOW DANGEROUS:

RESPONSE	DEPARTMENT TYPE															
	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
FAILS/LESS PERF AT HIGH SPD	46	10	5	11	5	7	6	7	10	11	8	10	7	15	5	17
POTEN. INJRY CAUSE(COLLISN)	40	9	6	13	3	4	0	0	8	9	11	13	9	20	3	10
POTEN. CAUSE OF INJURY(GEN)	26	6	2	4	1	1	5	6	5	6	5	6	5	11	3	10
DECRSE CONTROL OF VEHICLE	31	7	2	4	4	6	5	6	4	4	4	5	8	17	4	14
STRESS/WEAR CAUSE FAILURE	20	4	0	0	1	1	3	4	6	7	5	6	4	9	1	3
INTERFERES WITH DRIVER	9	2	1	2	0	0	0	0	3	3	2	2	2	4	1	3
INTERFERES WITH OFFICR DUTY	26	6	1	2	4	6	4	5	4	4	7	8	4	9	2	7
DECREASES VISIBILITY	17	4	1	2	1	1	1	1	7	8	3	4	3	7	1	3
PRISONER TRANSP MORE HAZARD	27	6	0	0	6	8	8	10	6	7	4	5	2	4	1	3
FAILURE (GENERAL)	45	10	4	9	2	3	5	6	14	16	13	16	4	9	3	10
FAILURE DURING COLLISION	26	6	1	2	0	0	5	6	7	8	4	5	6	13	3	10
LACK OF PROTECTN (GENERAL)	19	4	1	2	3	4	2	2	6	7	4	5	1	2	2	7
NOT STRONG ENOUGH (GENERAL)	19	4	1	2	1	1	5	6	5	6	2	2	4	9	1	3
NOT HEAVY ENOUGH (GENERAL)	6	1	0	0	0	0	3	4	1	1	1	1	1	2	0	0
INSUFFICIENT FOR PURPOSE	29	6	2	4	2	3	2	2	8	9	5	6	6	13	4	14
DESIGN PROBLEM (GENERAL)	10	2	2	4	2	3	0	0	2	2	3	4	1	2	0	0
NOT SECURED (GENERAL)	4	1	0	0	0	0	0	0	3	3	0	0	0	0	1	3
NOT ENOUGH ROOM (GENERAL)	11	2	0	0	2	3	1	1	1	1	3	4	3	7	1	3
OTHER	28	6	1	2	5	7	4	5	9	10	7	8	1	2	1	3
NO PROBLEMS/NONE	61	14	9	19	13	18	11	13	11	12	6	7	7	15	4	14
NO ANSWER/UNSPECIFIED	183	41	21	45	32	44	38	46	34	38	31	37	16	35	11	38
TOTAL	683	151	60	127	87	120	108	130	154	172	128	154	94	205	52	175

Table 19-3

19. WHAT FEATURE OF YOUR PRESENT PATROLCARS DO YOU CONSIDER DANGEROUS TO THE OCCUPANTS, AND HOW ARE THEY DANGEROUS? (NAME THE PATROLCAR FEATURES AND DESCRIBE THE DANGER IN THE SPACES PROVIDED BELOW)

HOW IS IT DANGEROUS?*

DANGEROUS FEATURE	A		B		C		D		E		F		G		H		I		J		K		L		M	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
BRAKE SYSTEM	2	0	0	0	28	6	15	3	0	0	3	1	5	1	5	1	0	0	2	0	0	0	0	0	10	2
RESTRAINT SYSTEM(S)	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	5	1	1	0	10	2	2	0	6	1
SHOTGUN MOUNT/HOLDER/RACK	0	0	0	0	0	0	0	0	7	2	0	0	0	0	0	0	0	0	3	1	2	0	0	0	3	1
TIRES	0	0	0	0	2	0	4	1	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	5	1
AUXILIARY FRONT SEAT EQUIP	0	0	0	0	0	0	0	0	12	3	0	0	0	0	1	0	1	0	5	1	0	0	0	0	9	2
LACK CRASH BARS/ROOF SUPPRT	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	3	1	5	1
BUMPERS	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	4	1	1	0
LACK OF BARRIER BTWN SEATS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	14	3	2	0	0	0	1	0	5	1
BODY CONSTRUC/STRENGTH	0	0	0	0	1	0	1	0	2	0	0	0	1	0	2	0	0	0	0	0	0	0	10	2	16	4
SUSPENSION SYS. (FT & REAR)	0	0	0	0	8	2	4	1	0	0	17	4	2	0	1	0	0	0	0	0	0	0	1	0	6	1
ENGINE PERFORMANCE	2	0	0	0	1	0	3	1	0	0	2	0	8	2	1	0	0	0	0	0	0	0	0	0	3	1
DOORS/DOOR LOCKS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	1	0	0	5	1	3	1	4	1
INSUFFICIENT HEADRM/LEGRM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	4	1	0	0	2	0
SEATS (FRONT AND REAR)	0	0	0	0	0	0	2	0	2	0	0	0	0	0	3	1	1	0	0	0	0	0	1	0	2	0
WINDSHIELD/WINDOWS	0	0	0	0	0	0	2	0	2	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	7	2
TRANSMISSION SYSTEM	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DESIGN PROB. (GENERAL)	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	2	0
REAR VIEW MIRROR/CORNR POST	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	2
EXHAUST SYSTEM/VENTILATION	1	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	3	1	0	0	0	0	1	0
STEERING WHEEL/COLUMN	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
SPOTLIGHT	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0
RADIO MOUNT/CONTROLS	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0
FENDER OVERHANG (FT & REAR)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
LIGHT WEIGHT	0	0	0	0	1	0	1	0	0	0	4	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
WIRING	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0
COMMENT, NOT FEATURE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MISCELLANEOUS	3	1	0	0	5	1	8	2	4	1	4	1	5	1	5	1	0	0	1	0	3	1	0	0	14	3
NO PROBLEMS/NONE	0	0	61	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO ANSWER	172	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

*A. NO ANSWER/UNSPECIFIED
B. NO PROBLEMS/NONE
C. FAILS/LESS PERF AT HIGH SPD
D. FAILURE (GENERAL)
E. POTEN. INJRY CAUSE(COLLISN)
F. DECRSE CONTROL OF VEHICLE
G. INSUFFICIENT FOR PURPOSE
H. OTHER
I. PRISONER TRANSP MORE HAZARD
J. POTEN. CAUSE OF INJURY(GEN)
K. INTERFERES WITH OFFICR DUTY
L. FAILURE DURING COLLISION
M. ALL OTHERS

Table 20-1

20. DO YOU THINK THAT SEPARATE SAFETY STANDARDS ARE NEEDED FOR PATROLCARS? THAT IS, DO YOU THINK THAT THE SAFETY STANDARDS FOR POLICE VEHICLES NEED TO BE DIFFERENT THAN THE SAFETY STANDARDS FOR CARS USED BY THE GENERAL PUBLIC?

RESPONSE	DEPARTMENT TYPE													
	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
YES	349	78	37	79	49	68	69	84	73	81	63	76	34	74	24	83
NO	90	20	10	21	19	26	10	12	16	18	18	22	12	26	5	17
NO ANSWER	10	2	0	0	4	6	3	4	1	1	2	2	0	0	0	0
TOTAL	449	100	47	100	72	100	82	100	90	100	83	100	46	100	29	100

Table 20-2

IF YES, WHY?

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
MORE USE THAN CIVILIAN CAR	92	26	7	19	7	14	16	23	20	27	20	32	12	35	10	42
DIFF. USE THAN CIVIL. CAR	116	33	13	35	20	41	21	30	20	27	23	37	11	32	8	33
PRISONER TRASPORT MENTION	4	1	0	0	0	0	1	1	2	3	0	0	0	0	1	4
DIFF. USE: HIGH SPEED USE	104	30	18	49	24	49	15	22	26	36	9	14	5	15	7	29
VARIETY OF DRIVING SPEEDS	12	3	2	5	0	0	0	0	3	4	3	5	2	6	2	8
USED UNDER EXTREME DRIVING CONDITIONS(WEATHER/RDS)	41	12	4	11	4	8	8	12	11	15	8	13	1	3	5	21
MANY DRIVERS FOR SAME CAR	15	4	0	0	1	2	2	3	1	1	3	5	4	12	4	17
MENTION OF SPECIFIC ASPECT OR SYSTEM OF CAR	64	18	14	38	11	22	11	16	6	8	9	14	11	32	2	8
GREATER RISK/MORE EXPOSURE TO ACCIDENTS	54	15	2	5	6	12	18	26	15	21	8	13	4	12	1	4
OTHER	11	3	1	3	1	2	5	7	2	3	0	0	1	3	1	4
NO ANSWER	28	8	0	0	2	4	7	10	7	10	8	13	4	12	0	0
TOTAL	541	153	61	165	76	154	104	150	113	155	91	146	55	162	41	170

Table 20-3

IF NO, WHY NOT?

RESPONSE	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
SFTY STANDARDS SHOULD APPLY EQUALLY TO ALL CARS	33	37	1	10	5	26	4	40	6	37	9	50	5	42	3	60
NO NEED (GENERAL)	8	9	0	0	2	11	1	10	2	12	2	11	1	8	0	0
NO HIGH SPEED DRIVING	3	3	0	0	0	0	0	0	0	0	3	17	0	0	0	0
GOOD DRIVNG ELIMINATES NEED	3	3	0	0	0	0	1	10	0	0	1	6	1	8	0	0
GOOD MAINTENANCE ELIM. NEED	2	2	0	0	1	5	0	0	1	6	0	0	0	0	0	0
WOULD COST TOO MUCH	4	4	2	20	0	0	0	0	1	6	0	0	1	8	0	0
OTHER	6	7	1	10	1	5	2	20	1	6	1	6	0	0	0	0
NO ANSWER	35	39	7	70	10	53	3	30	6	37	3	17	4	33	2	40
TOTAL	94	104	11	110	19	100	11	110	17	104	19	107	12	99	5	100

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16. ABSTRACT *(A 200-word or less factual summary of most significant information. If document includes a significant bibliography or literature survey, mention it here.)*

The report outlines the methodology of and summarizes a portion of the data from the LEAA Police Equipment Survey of 1972. One of a series of seven reports resulting from this nationwide mail survey of a stratified random sample of police departments, the present report summarizes the answers of 449 police departments concerning their patrolcars: Purchasing practices; types of options and accessories usually selected; types of equipment stored in the patrolcar; typical patterns of use; and needs for standards for systems or aspects of patrolcars. The data are presented by all responding departments and by seven department types.

17. KEY WORDS *(six to twelve entries; alphabetical order; capitalize only the first letter of the first key word unless a proper name; separated by semicolons)*

Patrolcar; Police; Police Vehicles; Standards

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