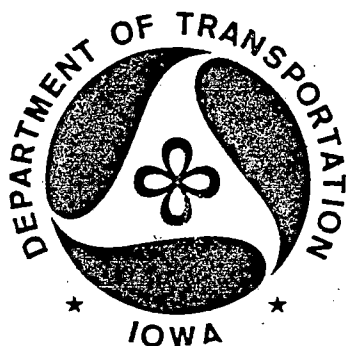


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VEHICLE OCCUPANCY

AUGUST 1981



Prepared By

IOWA DEPARTMENT OF TRANSPORTATION  
OFFICE OF TRANSPORTATION INVENTORY

# VEHICLE OCCUPANCY SURVEY

August 1981

## INTRODUCTION

The purpose of the survey is to monitor trends in vehicle occupancy. These trends may reflect changes in the driving habits of the general public caused by fuel shortages and economic conditions.

The survey consists of vehicle occupancy counts at the entrances and exits of parking lots of major industrial employers.

## SUMMARY

The vehicle occupancy counts at the industrial sites indicate little change from 1979 to 1981. The average occupancy of vehicles from these counts are shown below.

AVERAGE VEHICLE OCCUPANCY AT INDUSTRIAL SITES			
	1979	1980	1981
Passenger Cars	1.20	1.19	1.18
Pickups	1.14	1.14	1.14
All Vehicles	1.18	1.18	1.17

The survey procedures are shown below followed by tables with detailed information of the average vehicle occupancy data.

## SURVEY PROCEDURES

Four industries, three in Des Moines and one in Ankeny, were selected to make vehicle occupancy counts of passenger cars and pickups entering or leaving the parking lots of the industries.

The industries were:

Armstrong Rubber Co., 2345 E. Market, Des Moines  
John Deere, Hwy. 415, Ankeny  
Massey Ferguson, 1901 Bell, Des Moines  
Meredith Corporation, 5701 Park Ave., Des Moines

The occupancy counting was by size of the passenger cars (compact, mid-size and full-size) and pickups (small and standard) for varying periods of time and hours at each industry. The count periods included shift changes. The times counted in 1979, 1980, and 1981 were:

Armstrong Rubber Co.	10:30 a.m. to 12:30 p.m. For all entrances/exits
	2:30 p.m. to 4:30 p.m. For selected entrances/exits.

John Deere

6:15 a.m. to 8:45 a.m.  
Both the east and west  
entrances/exits.

2:30 p.m. to 5:00 p.m.  
Both the east and west  
entrances/exits.

Massey Ferguson

6:00 a.m. to 9:00 a.m.

Meredith Corporation

6:30 a.m. to 8:30 a.m.

TABLE 1

AVERAGE OCCUPANCY OF VEHICLES  
BY VEHICLE SIZE AT  
ALL INDUSTRIAL SITES

VEHICLE TYPE	1979			1980			1981		
	Number Vehicles Observed	Percent Of Total Vehicles Observed	Average Number Occupants Per Vehicle	Number Vehicles Observed	Percent Of Total Vehicles Observed	Average Number Occupants Per Vehicle	Number Vehicles Observed	Percent Of Total Vehicles Observed	Average Number Occupants Per Vehicle
Passenger Cars									
Compact	1073	23.82	1.16	1061	25.92	1.14	1099	24.03	1.10
Mid-size	1497	33.24	1.20	1165	28.46	1.21	782	17.10	1.23
Full-size	650	14.43	1.27	863	21.09	1.23	1520	33.23	1.21
Total	3220	71.49	1.20	3089	75.47	1.19	3401	74.36	1.18
Pickups									
Small	145	3.22	1.19	111	2.71	1.12	235	5.14	1.10
Standard	1139	25.29	1.13	893	21.82	1.15	938	20.50	1.15
Total	1284	28.51	1.14	1004	24.53	1.14	1173	25.64	1.14
All Vehicles	4504	100.00	1.18	4093	100.00	1.18	4574	100.00	1.17

TABLE I I A

AVERAGE OCCUPANCY OF VEHICLES  
BY VEHICLE SIZE AT  
ARMSTRONG RUBBER CO.

VEHICLE TYPE	1979			1980			1981		
	Number Vehicles Observed	Percent Of Total Vehicles Observed	Average Number Occupants Per Vehicle	Number Vehicles Observed	Percent Of Total Vehicles Observed	Average Number Occupants Per Vehicle	Number Vehicles Observed	Percent Of Total Vehicles Observed	Average Number Occupants Per Vehicle
Passenger Cars									
Compact	54	25.84	1.37	53	21.99	1.15	51	18.15	1.06
Mid-size	41	19.62	1.10	56	23.24	1.14	37	13.16	1.14
Full-size	45	21.53	1.20	65	26.97	1.11	95	33.81	1.11
Total	140	66.99	1.24	174	72.20	1.13	185	65.12	1.10
Pickups									
Small	8	3.83	1.25	9	3.73	1.00	13	4.63	1.00
Standard	61	29.18	1.08	58	24.07	1.10	85	30.25	1.09
Total	69	33.01	1.10	67	27.80	1.09	98	34.88	1.08
All Vehicles	209	100.00	1.19	241	100.00	1.12	281	100.00	1.09

TABLE II B

AVERAGE OCCUPANCY OF VEHICLES  
BY VEHICLE SIZE AT  
JOHN DEERE

VEHICLE TYPE	1979			1980			1981		
	Number Vehicles Observed	Percent Of Total Vehicles Observed	Average Number Occupants Per Vehicle	Number Vehicles Observed	Percent Of Total Vehicles Observed	Average Number Occupants Per Vehicle	Number Vehicles Observed	Percent Of Total Vehicles Observed	Average Number Occupants Per Vehicle
Passenger Cars									
Compact	531	20.95	1.16	481	23.24	1.16	602	22.19	1.13
Mid-size	804	31.73	1.24	763	36.86	1.25	453	16.70	1.22
Full-size	450	17.76	1.29	221	10.67	1.41	853	31.44	1.25
Total	1785	70.44	1.23	1465	70.77	1.24	1908	70.33	1.20
Pickups									
Small	101	3.99	1.20	64	3.09	1.16	158	5.82	1.08
Standard	648	25.57	1.16	541	26.14	1.16	647	23.85	1.16
Total	749	29.56	1.17	605	29.23	1.16	805	29.67	1.14
All Vehicles	2534	100.00	1.21	2070	100.00	1.22	2713	100.00	1.19

TABLE II C

AVERAGE OCCUPANCY OF VEHICLES  
BY VEHICLE SIZE  
AT MASSEY FERGUSON

VEHICLE TYPE	1979			1980			1981		
	Number Vehicles Observed	Percent Of Total Vehicles Observed	Average Number Occupants Per Vehicle	Number Vehicles Observed	Percent Of Total Vehicles Observed	Average Number Occupants Per Vehicle	Number Vehicles Observed	Percent Of Total Vehicles Observed	Average Number Occupants Per Vehicle
Passenger Cars									
Compact	50	16.39	1.30	120	34.68	1.13	96	28.92	1.04
Mid-size	49	16.07	1.27	88	25.44	1.15	48	14.46	1.17
Full-size	81	26.56	1.35	100	28.90	1.13	143	43.07	1.09
Total	180	59.02	1.31	308	89.02	1.13	287	86.45	1.09
Pickups									
Small	4	1.31	1.25	9	2.60	1.00	9	2.71	1.22
Standard	121	39.67	1.14	29	8.38	1.31	36	10.84	1.06
Total	125	40.98	1.14	38	10.98	1.24	45	13.55	1.09
All Vehicles	305	100.00	1.24	346	100.00	1.14	332	100.00	1.09

TABLE 11.0

AVERAGE OCCUPANCY OF VEHICLES  
BY VEHICLE SIZE  
AT MEREDITH CORPORATION

VEHICLE TYPE	1979			1980			1981		
	Number Vehicles Observed	Percent Of Total Vehicles Observed	Average Number Occupants Per Vehicle	Number Vehicles Observed	Percent Of Total Vehicles Observed	Average Number Occupants Per Vehicle	Number Vehicles Observed	Percent Of Total Vehicles Observed	Average Number Occupants Per Vehicle
Passenger Cars									
Compact	438	30.08	1.12	407	28.34	1.11	350	28.04	1.08
Mid-size	603	41.42	1.14	258	17.97	1.12	244	19.55	1.28
Full-size	74	5.08	1.12	477	33.22	1.18	429	34.38	1.18
Total	1115	76.58	1.13	1142	79.53	1.14	1023	81.97	1.17
-/-									
Pickups									
Small	32	2.20	1.16	29	2.02	1.10	55	4.41	1.28
Standard	309	21.22	1.09	265	18.45	1.11	170	13.62	1.17
Total	341	23.42	1.09	294	20.47	1.11	225	18.03	1.17
All Vehicles	1456	100.00	1.12	1436	100.00	1.14	1248	100.00	1.17