12 MONTHS ENDED 30 JUNE 2012 9208.0

SURVEY OF MOTOR VEHICLE USE

AUSTRALIA

EMBARGO: 11.30AM (CANBERRA TIME) TUES 23 APR 2013

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INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070.

NOTES

ABOUT THIS PUBLICATION

This publication presents estimates from the 2012 Survey of Motor Vehicle Use (SMVU). It contains statistics on passenger vehicle, motor cycle, truck and bus use for characteristics such as distance travelled, tonne-kilometres and fuel consumption.

The data were collected by the Australian Bureau of Statistics (ABS) over the period 1 July 2011 to 30 June 2012.

Previously the SMVU data cubes were released under a separate catalogue number (cat. no. 9210.0.55.001). For this and future publications, the data cubes will be released under the same catalogue number as the main publication (cat. no. 9208.0).

COMPARISONS WITH PREVIOUS SURVEY RESULTS

Care should be taken when comparing data over time as movements may be subject to high sampling error. As a result the movements may not be statistically significant. See Explanatory Notes paragraph 14.

Additional information about the reliability of the level and movement estimates is given in the Technical Note.

Brian Pink
Australian Statistician

ABBREVIATIONS

'000	thousand
ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
ASGC	Australian Standard Geographical Classification
ATFCC	Australian Transport Freight Commodity Classification
Aust.	Australia
CNG	compressed natural gas
GCM	gross combination mass
GVM	gross vehicle mass
km	kilometre
LPG	liquefied petroleum gas
mill.	million
no.	number
NSW	New South Wales
NT	Northern Territory
Qld	Queensland
RSE	relative standard error
SA	South Australia
SE	standard error
Tas.	Tasmania
Vic.	Victoria
WA	Western Australia

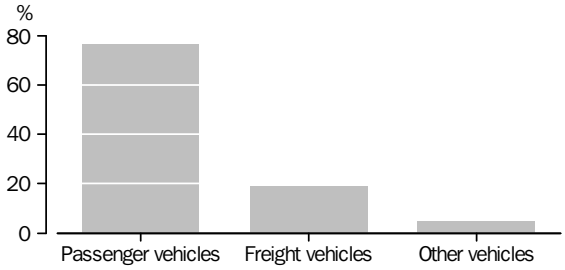
SUMMARY OF FINDINGS

NUMBER OF VEHICLES

In the 12 months ended 30 June 2012 there were an estimated 16.6 million vehicles registered in Australia.

In 2012, passenger vehicles made up 76.4% of all registered vehicles. Freight vehicles accounted for 18.8% of all registered vehicles with the remainder (4.8%) comprising buses, motor cycles and non-freight carrying trucks. Of the freight vehicles, 82.9% were light commercial vehicles, 14.2% were rigid trucks and 2.8% were articulated trucks.

FLEET CHARACTERISTICS, Percentage of vehicle type—Year ended 30 June 2012



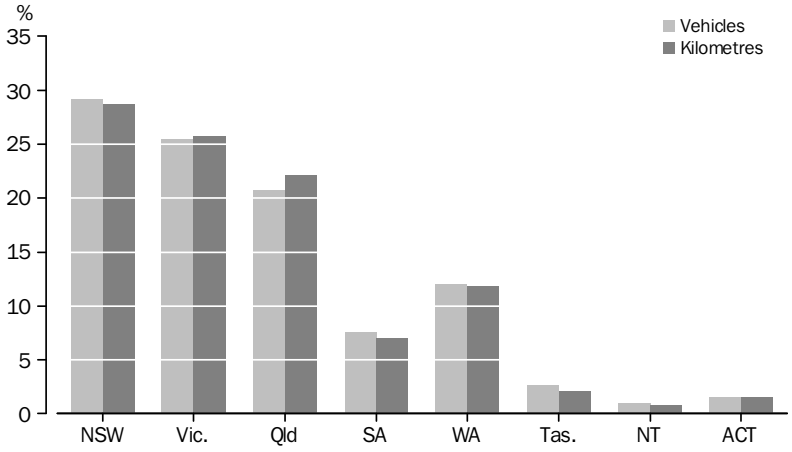
Other vehicles include buses, motorcycles and non-freight carrying trucks.

KILOMETRES TRAVELLED

Motor vehicles in Australia travelled an estimated 232,453 million kilometres in 2012.

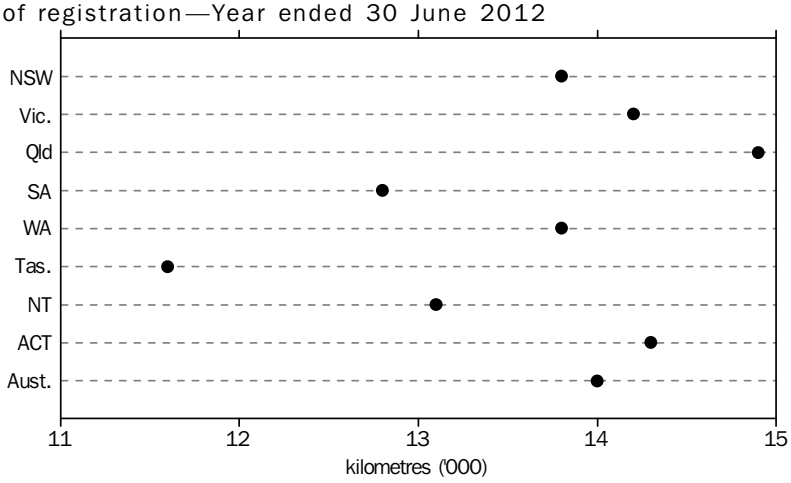
Consistent with the population distribution, New South Wales had the largest share of total kilometres travelled (28.7%) and the largest number of registered vehicles.

PROPORTION OF VEHICLES AND TOTAL KILOMETRES TRAVELLED, State/territory of registration—Year ended 30 June 2012



Motor vehicles registered in Australia travelled an average of 14,000 kilometres per vehicle in 2012. Vehicles registered in Queensland travelled the highest number of average kilometres (14,900 kilometres), while vehicles registered in Tasmania travelled the lowest number of average kilometres (11,600). Of all vehicle types, articulated truckes had the highest average kilometres (83,000).

AVERAGE KILOMETRES TRAVELLED, Motor vehicles by state/territory of registration—Year ended 30 June 2012



Passenger vehicles accounted for 72.0% of the total distance travelled in 2012.

Of the total kilometres travelled by passenger vehicles in 2012, 52.7% was for personal and other use. The remaining kilometres travelled by passenger vehicles comprised travel to and from work (27.3%) and business use (19.9%).

Freight carrying vehicles accounted for 26.0% of the total kilometres travelled in 2012. Of the 60,355 million kilometres travelled by freight carrying vehicles, light commercial vehicles accounted for 72.4% of the kilometres travelled, followed by rigid trucks (15.3%) and articulated trucks (12.2%).

TONNE-KILOMETRES

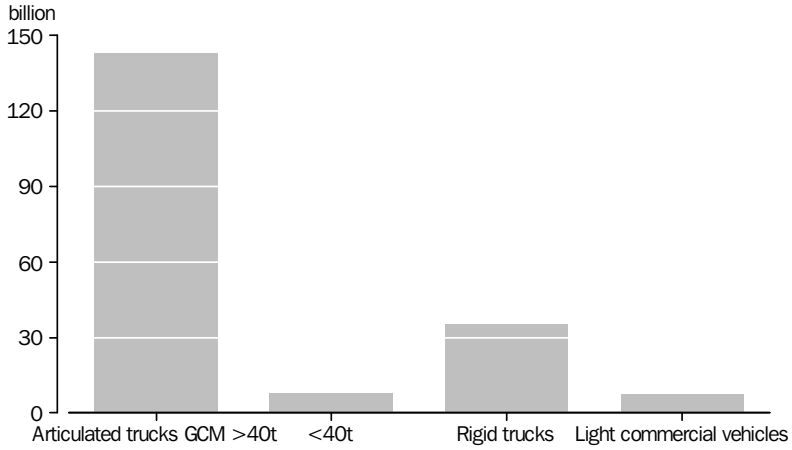
Total tonne-kilometres is the aggregation of the number of tonnes moved multiplied by the distance travelled in kilometres for each individual vehicle carrying freight.

In 2012, freight vehicles travelled 194, 033 million tonne-kilometres in Australia. Articulated trucks accounted for 77.8% (151, 003 million) of total tonne-kilometres travelled followed by rigid trucks (18.2%) and light commercial vehicles (4.0%).Articulated trucks with a Gross Combination Mass (GCM) of over 40 tonnes accounted for 94.6% (142, 806 million) of the total tonne-kilometres travelled by articulated trucks.

In 2012, articulated trucks travelled an average of 1.9 million tonne-kilometres. In comparison, rigid trucks and light commercial vehicles travelled an average of 92,300 and 5,800 tonne-kilometres, respectively.

TONNE-KILOMETRES *continued*

TOTAL TONNE-KILOMETRES TRAVELLED, Type of vehicle—Year ended 30 June 2012

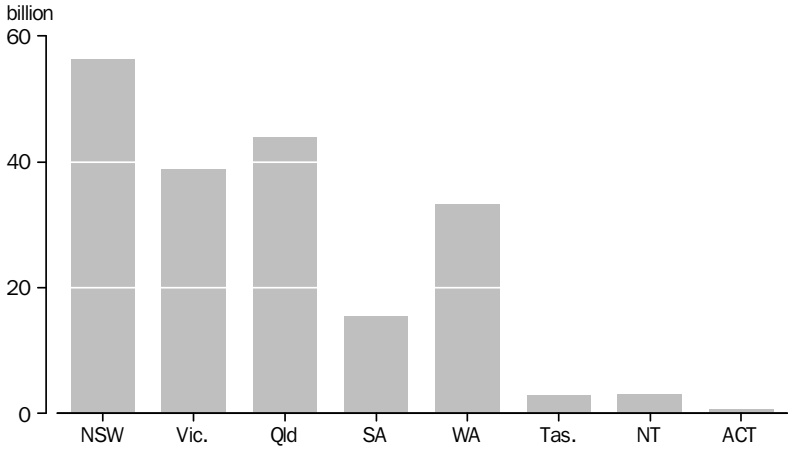


State/territory of operation

In 2012, freight vehicles operating in New South Wales travelled the most tonne-kilometres (56,158 million), followed by Queensland (43,933 million).

Over the period 2007 to 2012, tonne-kilometres travelled by freight vehicles in the Northern Territory increased by 46.9% (963 million). This was the largest percentage increase for any state or territory.

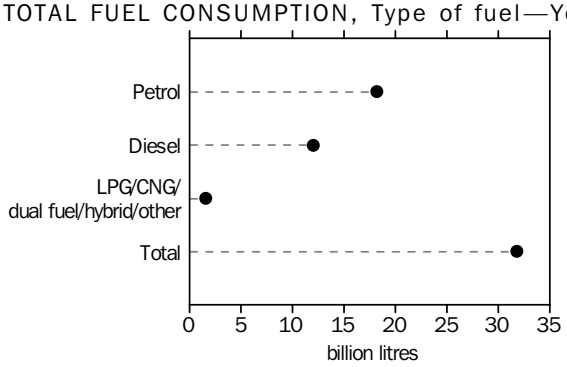
TOTAL TONNE-KILOMETRES TRAVELLED BY FREIGHT VEHICLES, State of operation, Year ended 30 June 2012



FUEL CONSUMPTION

In 2012, registered motor vehicles in Australia consumed 31,839 million litres of fuel. Of the total fuel consumed by motor vehicles in 2012, 57.3% was petrol and 37.7% was diesel.

TOTAL FUEL CONSUMPTION, Type of fuel—Year ended 30 June 2012



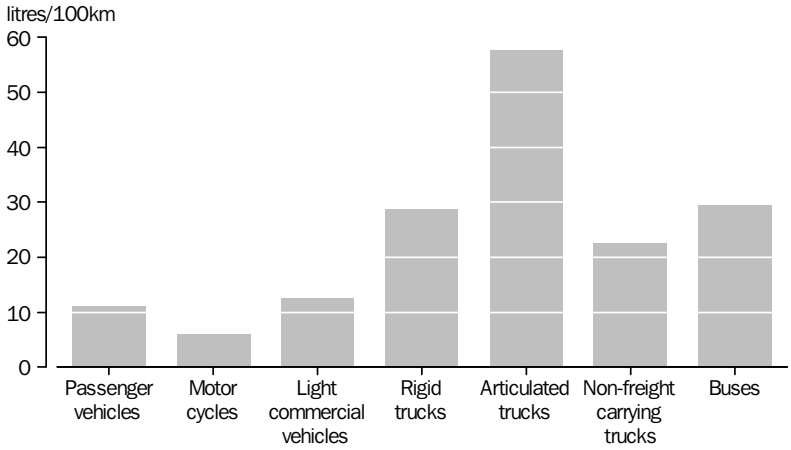
Passenger vehicles consumed 18,510 million litres of fuel in 2012, of which 84.8% (15,696 million litres) was petrol.

Light commercial vehicles consumed a total of 5,526 million litres of fuel. Diesel accounted for 49.7% (2,745 million litres) and petrol accounted for 42.8% (2,364 million litres).

A total of 6,909 million litres of fuel was consumed by rigid and articulated trucks. Diesel was the main fuel type (99.4%) consumed by trucks.

The average rate of fuel consumption for all motor vehicles in 2012 was 13.7 litres per 100 kilometres. Of all vehicle types, articulated trucks had the highest average fuel consumption with 57.7 litres per 100 kilometres.

AVERAGE FUEL CONSUMPTION, Type of vehicle—Year ended 30 June 2012



LIST OF TABLES

1 SUMMARY OF MOTOR VEHICLE USE, Type of vehicle—2005-07, 2010 and 2012(a)(b)

	2005	*2006*	*2007*	*2010*	*2012*
TOTAL KILOMETRES TRAVELLED *(million)*					
Passenger vehicles	155 068	156 184	157 928	163 360	167 456
Motor cycles	1 429	1 641	1 905	2 394	1 882
Light commercial vehicles	33 764	35 210	37 385	42 715	43 716
Rigid trucks	7 671	8 040	8 644	9 011	9 258
Articulated trucks	6 308	6 151	6 929	6 917	7 381
Non-freight carrying trucks	286	261	283	210	243
Buses	1 856	1 917	2 097	2 024	2 516
Total	**206 383**	**209 405**	**215 171**	**226 632**	**232 453**
NUMBER OF VEHICLES(c) *(no.)*					
Passenger vehicles	11 010 506	11 273 219	11 519 214	12 341 262	12 684 308
Motor cycles	421 549	458 169	508 626	653 186	703 524
Light commercial vehicles	1 996 269	2 081 738	2 183 449	2 441 929	2 590 864
Rigid trucks	366 875	386 626	392 837	433 258	444 564
Articulated trucks	68 509	69 696	74 343	81 376	88 871
Non-freight carrying trucks	20 304	19 971	20 024	21 538	21 536
Buses	62 350	63 177	66 330	72 509	78 371
Total	**13 946 362**	**14 352 595**	**14 764 823**	**16 045 057**	**16 612 038**
AVERAGE KILOMETRES TRAVELLED(d) *('000)*					
Passenger vehicles	14.1	13.9	13.7	13.2	13.2
Motor cycles	3.4	3.6	3.7	3.7	2.7
Light commercial vehicles	16.9	16.9	17.1	17.5	16.9
Rigid trucks	20.9	20.8	22.0	20.8	20.8
Articulated trucks	92.1	88.3	93.2	85.0	83.0
Non-freight carrying trucks	14.1	13.1	14.2	9.8	11.3
Buses	29.8	30.3	31.6	27.9	32.1
Total	**14.8**	**14.6**	**14.6**	**14.1**	**14.0**
TOTAL FUEL CONSUMPTION(e) *(million litres)*					
Passenger vehicles	18 144	17 831	18 094	18 431	18 510
Motor cycles	83	105	124	147	111
Light commercial vehicles	4 484	4 580	4 909	5 546	5 526
Rigid trucks	2 234	2 382	2 463	2 519	2 653
Articulated trucks	3 452	3 417	3 785	3 884	4 256
Non-freight carrying trucks	65	69	78	61	55
Buses	506	514	595	598	729
Total	**28 967**	**28 898**	**30 047**	**31 186**	**31 839**

(a) Data for 2005-07, 2010 are for 12 months ended 31 October. Data for 2012 are for 12 months ended 30 June.

(b) The survey is not designed to provide reliable estimates of inter-survey movements. See Explanatory Note 14.

(c) The average number of vehicles registered for the 12 months. Includes registered vehicles that did not travel during the reference period.

(d) Calculated using average number of registered vehicles. Includes registered vehicles that did not travel during the reference period.

(e) Calculated using the total distance travelled multiplied by the reported average rate of fuel consumption for each vehicle.

1 SUMMARY OF MOTOR VEHICLE USE, Type of vehicle—2005-07, 2010 and 2012(a)(b)

continued

	2005	*2006*	*2007*	*2010*	*2012*
AVERAGE RATE OF FUEL CONSUMPTION(c) *(litres per 100 kilometres)*					
Passenger vehicles	11.7	11.4	11.5	11.3	11.1
Motor cycles	5.8	6.4	6.5	6.1	5.9
Light commercial vehicles	13.3	13.0	13.1	13.0	12.6
Rigid trucks	29.1	29.6	28.5	28.0	28.7
Articulated trucks	54.7	55.6	54.6	56.2	57.7
Non-freight carrying trucks	22.7	26.4	27.6	29.0	22.6
Buses	27.3	26.8	28.3	29.5	29.0
Total	**14.0**	**13.8**	**14.0**	**13.8**	**13.7**

(a) Data for 2005-07, 2010 are for 12 months ended 31 October. Data for 2012 are for 12 months ended 30 June.

(b) The survey is not designed to provide reliable estimates of inter-survey movements. See Explanatory Note 14.

(c) Calculated using the total fuel consumption divided by the total kilometres travelled.

2 SUMMARY OF FREIGHT USE, Type of vehicle—2005-07, 2010 and 2012(a)(b)

	2005	2006	2007	2010	2012
TOTAL LADEN BUSINESS KILOMETRES TRAVELLED *(million)*					
Light commercial vehicles	15 537	16 276	17 400	17 035	18 496
Rigid trucks	5 169	5 596	5 816	6 079	6 346
Articulated trucks	4 777	4 604	5 122	5 000	5 289
Total freight vehicles	**25 483**	**26 477**	**28 338**	**28 114**	**30 130**
AVERAGE LADEN BUSINESS KILOMETRES TRAVELLED(c) *('000)*					
Light commercial vehicles	13.5	14.1	14.4	13.1	13.8
Rigid trucks	16.8	16.9	17.5	16.3	16.6
Articulated trucks	75.9	71.9	73.8	66.5	65.8
Total freight vehicles	**16.8**	**17.1**	**17.6**	**16.1**	**16.7**
TOTAL TONNE-KILOMETRES TRAVELLED(d) *(million)*					
Light commercial vehicles	7 308	7 914	6 597	7 233	7 738
Rigid trucks	30 160	31 006	33 873	34 441	35 293
Articulated trucks	126 926	129 014	143 601	144 237	151 003
Total freight vehicles	**164 394**	**167 935**	**184 072**	**185 911**	**194 033**
AVERAGE TONNE-KILOMETRES TRAVELLED(e) *('000)*					
Light commercial vehicles	6.4	6.8	5.5	5.6	5.8
Rigid trucks	98.0	93.7	101.9	92.6	92.3
Articulated trucks	2 015.9	2 014.9	2 068.7	1 919.2	1 877.8
Total freight vehicles	**108.2**	**108.2**	**114.5**	**106.6**	**107.9**
TOTAL TONNES CARRIED(f)(g) *(million)*					
Light commercial vehicles	136	151	166	161	167
Rigid trucks	938	881	1 035	951	1 018
Articulated trucks	682	812	946	980	1 094
Total freight vehicles	**1 756**	**1 844**	**2 146**	**2 092**	**2 280**
AVERAGE LOAD CARRIED PER TRIP(h) *(kilograms)*					
Light commercial vehicles	423	460	357	406	381
Rigid trucks	6 415	5 624	6 374	5 390	5 611
Articulated trucks	23 872	24 112	24 746	25 351	24 801
Total freight vehicles	**3 543**	**3 555**	**3 229**	**3 416**	**3 433**

(a) Data for 2005-07, 2010 are for 12 months ended 31 October. Data for 2012 are for 12 months ended 30 June.

(b) The survey is not designed to provide reliable estimates of inter-survey movements. See Explanatory Note 14.

(c) Calculated using the total laden business kilometres travelled divided by the number of vehicles that travelled laden business kilometres.

(d) Calculated using the laden distance travelled for work purposes and average load weights as reported by respondents.

(e) Calculated using the total tonne-kilometres travelled divided by the number of vehicles that travelled tonne-kilometres.

(f) Calculated using number of weeks used for business multiplied by the number of trips per week multiplied by the average load.

(g) Number of weeks used for business may be affected by the change in reporting period. Refer to Technical Note 24 for more information.

(h) Calculated using the total load carried divided by the total number of laden trips.

3 SUMMARY OF MOTOR VEHICLE USE, State/territory of registration—2005-07, 2010 and 2012(a)(b)

	2005	*2006*	*2007*	*2010*	*2012*
TOTAL KILOMETRES TRAVELLED *(million)*					
New South Wales	63 717	61 400	62 732	66 581	66 712
Victoria	51 952	54 698	57 930	60 171	60 066
Queensland	44 526	45 431	46 071	48 517	51 317
South Australia	14 533	15 535	14 212	14 615	16 312
Western Australia	21 647	22 616	24 289	26 285	27 500
Tasmania	5 302	5 065	4 992	4 975	4 904
Northern Territory	1 603	1 647	1 785	1 949	1 854
Australian Capital Territory	3 104	3 014	3 160	3 539	3 787
Australia	**206 383**	**209 405**	**215 171**	**226 632**	**232 453**
NUMBER OF VEHICLES(c) *(no.)*					
New South Wales	4 193 362	4 261 321	4 351 910	4 673 192	4 839 152
Victoria	3 650 826	3 740 570	3 825 633	4 108 442	4 239 351
Queensland	2 764 824	2 903 610	3 036 175	3 362 083	3 436 008
South Australia	1 107 910	1 139 681	1 147 367	1 233 241	1 270 552
Western Australia	1 542 199	1 600 823	1 678 470	1 871 679	1 996 355
Tasmania	360 238	373 797	380 105	409 949	424 035
Northern Territory	109 968	111 967	118 132	133 700	141 257
Australian Capital Territory	217 036	220 827	227 031	252 771	265 327
Australia	**13 946 362**	**14 352 595**	**14 764 823**	**16 045 057**	**16 612 038**
AVERAGE KILOMETRES TRAVELLED(d) *('000)*					
New South Wales	15.2	14.4	14.4	14.2	13.8
Victoria	14.2	14.6	15.1	14.6	14.2
Queensland	16.1	15.6	15.2	14.4	14.9
South Australia	13.1	13.6	12.4	11.9	12.8
Western Australia	14.0	14.1	14.5	14.0	13.8
Tasmania	14.7	13.5	13.1	12.1	11.6
Northern Territory	14.6	14.7	15.1	14.6	13.1
Australian Capital Territory	14.3	13.6	13.9	14.0	14.3
Australia	**14.8**	**14.6**	**14.6**	**14.1**	**14.0**

(a) Data for 2005-07, 2010 are for 12 months ended 31 October. Data for 2012 are for 12 months ended 30 June.

(b) The survey is not designed to provide reliable estimates of inter-survey movements. See Explanatory Note 14.

(c) The average number of vehicles registered for the 12 months. Includes registered vehicles that did not travel during the reference period.

(d) Calculated using the total kilometres travelled divided by the average number of registered vehicles. Including registered vehicles that did not travel during the reference period.

4 MOTOR VEHICLE USE, State/territory of registration—Type of vehicle

	Passenger vehicles	*Motor cycles*	*Light commercial vehicles*	*Rigid trucks*	*Articulated trucks*	*Non-freight carrying trucks*	*Buses*	*Total*
TOTAL KILOMETRES TRAVELLED *(million)*								
New South Wales	48 550	519	12 881	2 540	1 483	49	688	66 712
Victoria	44 369	384	10 316	2 248	2 132	54	562	60 066
Queensland	35 853	340	10 251	2 278	1 891	76	627	51 317
South Australia	12 203	*163	2 564	595	630	13	145	16 312
Western Australia	19 004	*366	5 498	1 243	1 030	38	321	27 500
Tasmania	3 386	49	1 092	197	120	8	53	4 904
Northern Territory	1 044	19	533	93	77	np	np	1 854
Australian Capital Territory	3 045	*42	583	65	17	np	np	3 787
Australia	**167 456**	**1 882**	**43 716**	**9 258**	**7 381**	**243**	**2 516**	**232 453**
NUMBER OF VEHICLES(a) *(no.)*								
New South Wales	3 807 490	181 930	684 106	122 862	18 727	3 427	20 609	4 839 152
Victoria	3 359 697	160 390	566 125	105 371	25 660	5 238	16 869	4 239 351
Queensland	2 448 252	162 351	680 856	102 276	19 758	4 898	17 617	3 436 008
South Australia	1 004 952	52 901	166 637	30 876	7 967	1 942	5 278	1 270 552
Western Australia	1 453 492	110 570	338 466	63 479	13 769	4 633	11 947	1 996 355
Tasmania	300 733	16 182	91 050	11 278	1 681	978	2 134	424 035
Northern Territory	87 345	5 828	37 709	5 853	1 146	np	np	141 257
Australian Capital Territory	222 346	13 372	25 915	2 569	164	np	np	265 327
Australia	**12 684 308**	**703 524**	**2 590 864**	**444 564**	**88 871**	**21 536**	**78 371**	**16 612 038**
AVERAGE KILOMETRES TRAVELLED(b) *('000)*								
New South Wales	12.8	2.9	18.8	20.7	79.2	14.4	33.4	13.8
Victoria	13.2	2.4	18.2	21.3	83.1	10.3	33.3	14.2
Queensland	14.6	2.1	15.1	22.3	95.7	15.5	35.6	14.9
South Australia	12.1	3.1	15.4	19.3	79.1	6.5	27.4	12.8
Western Australia	13.1	*3.3	16.2	19.6	74.8	8.3	26.9	13.8
Tasmania	11.3	3.0	12.0	17.5	71.4	8.2	24.7	11.6
Northern Territory	12.0	3.2	14.1	15.8	66.8	8.4	28.2	13.1
Australian Capital Territory	13.7	3.1	22.5	25.3	104.4	15.6	np	14.3
Australia	**13.2**	**2.7**	**16.9**	**20.8**	**83.0**	**11.3**	**32.1**	**14.0**

* estimate has a relative standard error of 25% to 50% and should be used with caution

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) The average number of vehicles registered for the 12 months. Includes registered vehicles that did not travel during the reference period.

(b) Calculated using the total kilometres travelled divided by the average number of registered vehicles. Including registered vehicles that did not travel during the reference period.

5 FUEL CONSUMPTION, Type of fuel—Type of vehicle

	Passenger vehicles	*Motor cycles*	*Light commercial vehicles*	*Rigid trucks*	*Articulated trucks*	*Non-freight carrying trucks*	*Buses*	*Total*
TOTAL FUEL CONSUMPTION(a) *(million litres)*								
Petrol	15 696	111	2 364	*21	—	*—	37	18 228
Diesel	1 773	—	2 745	2 626	4 241	53	571	12 008
Other(b)	1 041	—	*417	*7	*15	**2	121	1 602
Total	**18 510**	**111**	**5 526**	**2 653**	**4 256**	**55**	**729**	**31 839**
AVERAGE RATE OF FUEL CONSUMPTION(c) *(litres per 100 kilometres)*								
Petrol	10.9	5.9	13.6	22.9	—	13.9	13.9	11.2
Diesel	10.7	—	11.6	28.7	57.7	22.6	29.7	20.4
Other(b)	14.7	—	15.8	*28.8	44.7	*28.0	37.1	15.8
Total	**11.1**	**5.9**	**12.6**	**28.7**	**57.7**	**22.6**	**29.0**	**13.7**

* estimate has a relative standard error of 25% to 50% and should be used with caution

** estimate has a relative standard error greater than 50% and is considered too unreliable for general use

— nil or rounded to zero (including null cells)

(a) Calculated using the total distance travelled multiplied by the reported average rate of fuel consumption for each vehicle.

(b) Other fuel type includes LPG, CNG, dual fuel, hybrid and other.

(c) Calculated using the total fuel consumption divided by the total kilometres travelled.

AREA OF OPERATION, Type of vehicle

WITHIN STATE/TERRITORY OF REGISTRATION

	Capital city	*Other urban areas*	*Other areas*	*Total intrastate*	*Interstate*	*Australia*
TOTAL KILOMETRES TRAVELLED *(million)*						
Passenger vehicles	96 187	28 960	35 094	160 240	7 215	167 456
Motor cycles	958	281	525	1 764	*119	1 882
Light commercial vehicles	18 718	7 950	15 086	41 753	1 963	43 716
Rigid trucks	4 797	1 392	2 648	8 836	422	9 258
Articulated trucks	1 556	657	3 272	5 485	1 895	7 381
Non-freight carrying trucks	126	52	56	234	*9	243
Buses	1 416	414	613	2 443	74	2 516
Total	**123 757**	**39 705**	**57 293**	**220 756**	**11 697**	**232 453**
AVERAGE KILOMETRES TRAVELLED(a) *('000)*						
Passenger vehicles	10.6	7.1	8.8	13.2	7.0	13.7
Motor cycles	3.2	1.9	2.7	3.4	2.9	3.6
Light commercial vehicles	13.6	8.7	12.8	16.7	9.5	17.4
Rigid trucks	22.1	11.9	15.8	22.1	14.4	22.7
Articulated trucks	34.4	22.5	58.8	69.2	80.2	89.2
Non-freight carrying trucks	18.1	10.7	7.2	13.1	*6.1	13.2
Buses	31.3	18.2	21.5	32.1	15.7	32.9
Total	**11.2**	**7.5**	**10.2**	**14.1**	**8.8**	**14.7**

* estimate has a relative standard error of 25% to 50% and should be used with caution

(a) Average distance travelled for registered vehicles which were used. Excludes registered vehicles that did not travel during the reference period.

AREA OF OPERATION, State/territory of registration

	WITHIN STATE/TERRITORY OF REGISTRATION					
	Capital city	*Other urban areas*	*Other areas*	*Total intrastate*	*Interstate*	*Australia*
	TOTAL KILOMETRES TRAVELLED *(million)*					
New South Wales	33 932	12 431	16 580	62 942	*3 769	66 712
Victoria	35 757	8 387	12 730	56 873	3 193	60 066
Queensland	22 650	15 173	11 649	49 472	1 845	51 317
South Australia	10 116	—	5 181	15 297	1 016	16 312
Western Australia	15 609	2 164	8 968	26 740	*760	27 500
Tasmania	1 651	1 550	1 501	4 702	202	4 904
Northern Territory	1 043	—	685	1 728	126	1 854
Australian Capital Territory	3 000	—	—	3 000	787	3 787
Australia	**123 757**	**39 705**	**57 293**	**220 756**	**11 697**	**232 453**
	AVERAGE KILOMETRES TRAVELLED (a) *('000)*					
New South Wales	11.2	7.1	9.2	13.4	*7.7	14.1
Victoria	11.5	6.2	9.3	14.2	11.1	14.8
Queensland	11.4	9.4	11.1	15.5	7.3	15.9
South Australia	10.4	—	9.2	12.7	10.9	13.4
Western Australia	11.1	5.5	15.4	14.8	12.7	15.1
Tasmania	8.0	8.2	7.8	12.1	12.6	12.4
Northern Territory	11.2	—	10.9	13.2	19.5	13.9
Australian Capital Territory	11.9	—	—	11.9	6.1	14.8
Australia	**11.2**	**7.5**	**10.2**	**14.1**	**8.8**	**14.7**

* estimate has a relative standard error of 25% to 50% and should be used with caution

— nil or rounded to zero (including null cells)

(a) Average distance travelled for registered vehicles which were used. Excludes registered vehicles that did not travel during the reference period.

BUSINESS AND PRIVATE USE OF VEHICLES, Type of vehicle

	BUSINESS					
	Laden	*Unladen*	*All business use*(a)	*To and from work*	*Personal and other*	*Total*
TOTAL KILOMETRES TRAVELLED *(million)*						
Passenger vehicles	—	—	33 379	45 756	88 321	167 456
Motor cycles	—	—	*234	395	1 253	1 882
Light commercial vehicles	18 496	6 813	25 309	8 103	10 304	43 716
Rigid trucks	6 346	2 618	8 964	141	154	9 258
Articulated trucks	5 289	2 072	7 361	*18	*2	7 381
Non-freight carrying trucks	—	—	231	*2	**10	243
Buses	—	—	2 400	40	77	2 516
Total	**30 130**	**11 503**	**77 877**	**54 455**	**100 120**	**232 453**
AVERAGE KILOMETRES TRAVELLED(b) ***('000)***						
Passenger vehicles	—	—	8.4	7.2	8.0	13.7
Motor cycles	—	—	*2.9	2.3	2.8	3.6
Light commercial vehicles	13.8	8.0	17.0	7.6	6.8	17.4
Rigid trucks	16.6	9.1	23.2	4.3	5.3	22.7
Articulated trucks	65.8	29.6	90.4	5.2	*1.2	89.2
Non-freight carrying trucks	—	—	13.1	3.8	**8.5	13.2
Buses	—	—	33.8	6.3	8.7	32.9
Total	**16.7**	**9.5**	**12.7**	**7.2**	**7.7**	**14.7**

* estimate has a relative standard error of 25% to 50% and should be used with caution

** estimate has a relative standard error greater than 50% and is considered too unreliable for general use

— nil or rounded to zero (including null cells)

(a) Including the business travel of non-freight carrying vehicles.

(b) Average distance travelled for registered vehicles which were used. Excludes registered vehicles that did not travel during the reference period.

	BUSINESS					
	Laden	*Unladen*	*All business use*(a)	*To and from work*	*Personal and other*	*Total*
TOTAL KILOMETRES TRAVELLED *(million)*						
New South Wales	8 031	3 477	23 194	15 834	27 684	66 712
Victoria	7 947	2 267	19 242	13 816	27 008	60 066
Queensland	7 129	2 865	16 934	12 293	22 089	51 317
South Australia	1 872	934	5 355	3 772	7 185	16 312
Western Australia	3 895	1 327	9 656	6 149	11 695	27 500
Tasmania	603	289	1 656	1 090	2 158	4 904
Northern Territory	305	189	857	454	543	1 854
Australian Capital Territory	350	157	983	1 046	1 758	3 787
Australia	**30 130**	**11 503**	**77 877**	**54 455**	**100 120**	**232 453**
AVERAGE KILOMETRES TRAVELLED(b) ***('000)***						
New South Wales	17.6	10.4	12.7	7.1	7.1	14.1
Victoria	17.7	7.8	12.0	6.9	7.9	14.8
Queensland	16.5	10.6	12.8	8.1	8.5	15.9
South Australia	13.9	9.2	11.8	6.5	7.1	13.4
Western Australia	16.7	9.4	15.4	7.0	7.9	15.1
Tasmania	12.4	7.6	12.0	6.1	6.8	12.4
Northern Territory	12.0	9.7	14.2	6.4	6.2	13.9
Australian Capital Territory	18.0	11.5	12.0	7.4	7.7	14.8
Australia	**16.7**	**9.5**	**12.7**	**7.2**	**7.7**	**14.7**

(a) All business use includes laden, unladen and non-freight carrying vehicles eg. motor cycles, passenger vehicles, buses and non-freight carrying trucks. See Business kilometres in the Glossary.

(b) Average distance travelled for registered vehicles which were used. Excludes registered vehicle that did not travel during the reference period.

10 BUSINESS KILOMETRES, State/territory of registration—Type of vehicle

	Passenger vehicles	*Motor cycles*	*Light commercial vehicles*	*Rigid trucks*	*Articulated trucks*	*Non-freight carrying trucks*	*Buses*	*Total*
TOTAL BUSINESS KILOMETRES TRAVELLED *(million)*								
New South Wales	10 940	*38	7 573	2 455	1 478	47	661	23 194
Victoria	8 382	*56	5 917	2 169	2 127	51	539	19 242
Queensland	6 255	*24	5 906	2 202	1 886	70	590	16 934
South Australia	2 373	**25	1 594	582	629	12	140	5 355
Western Australia	*4 016	**77	2 982	1 213	1 027	38	303	9 656
Tasmania	700	*6	585	188	119	8	51	1 656
Northern Territory	276	*1	326	91	76	np	np	857
Australian Capital Territory	436	*6	425	64	17	np	np	983
Australia	**33 379**	***234**	**25 309**	**8 964**	**7 361**	**231**	**2 400**	**77 877**
AVERAGE BUSINESS KILOMETRES TRAVELLED (a) *('000)*								
New South Wales	8.6	*1.8	19.7	21.9	86.4	15.9	34.4	12.7
Victoria	7.7	*2.8	16.6	24.5	91.5	11.3	34.2	12.0
Queensland	7.8	**1.4	16.0	24.6	99.2	17.9	37.7	12.8
South Australia	8.1	*3.1	14.2	21.0	84.0	6.8	30.1	11.8
Western Australia	*11.1	**8.7	16.6	23.1	86.1	11.7	29.5	15.4
Tasmania	8.6	*3.0	13.8	20.8	82.7	9.5	24.9	12.0
Northern Territory	9.8	*3.0	14.4	16.6	76.5	10.2	31.9	14.2
Australian Capital Territory	7.3	*4.9	24.0	26.0	104.1	16.3	np	12.0
Australia	**8.4**	***2.9**	**17.0**	**23.2**	**90.4**	**13.1**	**33.8**	**12.7**

* estimate has a relative standard error of 25% to 50% and should be used with caution

** estimate has a relative standard error greater than 50% and is considered too unreliable for general use

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Average distance travelled for registered vehicles which were used. Excludes registered vehicles that did not travel during the reference period.

11 BUSINESS KILOMETRES TRAVELLED BY FREIGHT VEHICLES, State/territory of registration

	Light commercial vehicles	*Rigid trucks*	*Articulated trucks*	*Total*
TOTAL LADEN BUSINESS KILOMETRES TRAVELLED *(million)*				
New South Wales	5 276	1 671	1 084	8 031
Victoria	4 748	1 592	1 606	7 947
Queensland	4 210	1 555	1 364	7 129
South Australia	1 024	395	453	1 872
Western Australia	2 354	899	642	3 895
Tasmania	397	128	79	603
Northern Territory	196	59	50	305
Australian Capital Territory	291	47	12	350
Australia	**18 496**	**6 346**	**5 289**	**30 130**
AVERAGE LADEN BUSINESS KILOMETRES TRAVELLED (a) *('000)*				
New South Wales	16.0	15.3	64.2	17.6
Victoria	14.1	18.1	69.8	17.7
Queensland	13.0	17.6	71.9	16.5
South Australia	10.2	14.3	61.6	13.9
Western Australia	13.9	17.3	55.1	16.7
Tasmania	10.4	14.3	55.6	12.4
Northern Territory	10.3	10.9	51.3	12.0
Australian Capital Territory	17.4	19.1	74.2	18.0
Australia	**13.8**	**16.6**	**65.8**	**16.7**

(a) Calculated using the total laden business kilometres travelled divided by the number of vehicles that travelled laden business kilometres.

12 TONNE-KILOMETRES TRAVELLED BY FREIGHT VEHICLES, State/territory of registration

	Light commercial vehicles	*Rigid trucks*	*Articulated trucks*	*Total*
TOTAL TONNE-KILOMETRES TRAVELLED(a) *(million)*				
New South Wales	2 544	10 148	25 765	38 457
Victoria	1 485	8 858	41 087	51 430
Queensland	1 542	7 988	39 294	48 824
South Australia	482	2 475	13 920	16 877
Western Australia	1 311	4 283	26 427	32 021
Tasmania	174	971	1 905	3 050
Northern Territory	67	*361	2 344	2 772
Australian Capital Territory	*134	209	259	603
Australia	**7 738**	**35 293**	**151 003**	**194 033**
AVERAGE TONNE-KILOMETRES TRAVELLED(b) *('000)*				
New South Wales	7.7	92.7	1 525.7	84.3
Victoria	4.4	100.7	1 786.2	114.6
Queensland	4.7	90.2	2 070.6	112.9
South Australia	4.8	89.8	1 892.4	125.2
Western Australia	7.7	82.4	2 270.4	137.3
Tasmania	4.5	108.8	1 344.1	62.7
Northern Territory	3.5	*66.4	2 396.4	108.8
Australian Capital Territory	8.0	85.7	1 643.6	31.1
Australia	**5.8**	**92.3**	**1 877.8**	**107.9**

* estimate has a relative standard error of 25% to 50% and should be used with caution

(a) Calculated using the laden distance travelled for work purposes and average load weights as reported by respondents.

(b) Calculated using the total tonne-kilometres travelled divided by the total number of vehicles that travelled tonne-kilometres.

13 TONNE-KILOMETRES TRAVELLED BY FREIGHT VEHICLES, State/territory of operation

	Light commercial vehicles	*Rigid trucks*	*Articulated trucks*	*Total*
TOTAL TONNE-KILOMETRES TRAVELLED(a) *(million)*				
New South Wales	2 586	10 376	43 197	56 158
Victoria	1 477	8 940	28 343	38 761
Queensland	1 522	8 103	34 308	43 933
South Australia	497	2 042	12 939	15 478
Western Australia	1 277	4 238	27 663	33 178
Tasmania	173	934	1 766	2 874
Northern Territory	65	*398	2 551	3 015
Australian Capital Territory	140	261	*235	636
Australia	**7 738**	**35 293**	**151 003**	**194 033**
AVERAGE TONNE-KILOMETRES TRAVELLED(b) *('000)*				
New South Wales	6.7	85.6	1 415.4	104.5
Victoria	4.2	99.4	1 012.3	82.0
Queensland	4.5	87.6	1 330.7	95.9
South Australia	4.4	69.0	1 040.6	100.5
Western Australia	8.1	79.5	2 131.0	148.1
Tasmania	4.1	105.5	1 266.3	54.7
Northern Territory	3.4	*57.5	1 079.4	105.5
Australian Capital Territory	*3.4	*34.0	191.9	*12.7
Australia	**5.8**	**92.3**	**1 877.8**	**107.9**

* estimate has a relative standard error of 25% to 50% and should be used with caution

(a) Calculated using the laden distance travelled for work purposes and average load weights as reported by respondents.

(b) Calculated using the total tonne-kilometres travelled divided by the number of vehicles that travelled tonne-kilometres.

	8 tonnes and under	*Over 8 tonnes to 20 tonnes*	*Over 20 tonnes*	*Total*
TOTAL TONNE-KILOMETRES TRAVELLED(b) *(million)*				
2 axles	2 444	7 833	*835	11 112
3 axles	**—	*320	19 977	20 297
4 or more axles	—	—	3 883	3 883
Total	**2 444**	**8 153**	**24 695**	**35 293**
AVERAGE TONNE-KILOMETRES TRAVELLED(c) *('000)*				
2 axles	15.6	55.7	*193.1	36.9
3 axles	**12.1	*93.8	302.1	291.7
4 or more axles	—	—	338.8	338.8
Total	**15.6**	**56.6**	**301.5**	**92.3**

* estimate has a relative standard error of 25% to 50% and should be used with caution

** estimate has a relative standard error greater than 50% and is considered too unreliable for general use

— nil or rounded to zero (including null cells)

(a) Gross Vehicle Mass/Gross Combination Mass. See Glossary.

(b) Calculated using the laden distance travelled for work purposes and average load weights as reported by respondents.

(c) Calculated using the total tonne-kilometres travelled divided by the number of vehicles that travelled tonne-kilometres.

	30 tonnes and under	*Over 30 tonnes to 40 tonnes*	*Over 40 tonnes*	*Total*
TOTAL TONNE-KILOMETRES TRAVELLED (b) *(million)*				
Single axle trailer	**92	—	—	**92
Tandem axle trailer	*190	4 024	**825	5 039
Triaxle trailer	**7	3 884	41 247	45 137
B-Double	—	—	59 794	59 794
Road train	—	—	36 071	36 071
Other	—	—	4 869	4 869
Total	***289**	**7 908**	**142 806**	**151 003**
AVERAGE TONNE-KILOMETRES TRAVELLED (c) *('000)*				
Single axle trailer	**90.0	—	—	**90.0
Tandem axle trailer	*181.2	505.8	**633.3	488.9
Triaxle trailer	234.9	739.7	1 076.5	1 035.4
B-Double	—	—	4 234.3	4 234.3
Road train	—	—	4 029.0	4 029.0
Other	—	—	2 015.8	2 015.8
Total	***137.4**	**598.8**	**2 193.4**	**1 877.8**

* estimate has a relative standard error of 25% to 50% and should be used with caution

** estimate has a relative standard error greater than 50% and is considered too unreliable for general use

— nil or rounded to zero (including null cells)

(a) Gross Combination Mass. See Glossary.

(b) Calculated using the laden distance travelled for work purposes and average load weights as reported by respondents.

(c) Calculated using the total tonne-kilometres travelled divided by the number of vehicles that travelled tonne-kilometres.

16 FREIGHT VEHICLE USE, State/territory of registration—Type of vehicle

	Light commercial vehicles	*Rigid trucks*	*Articulated trucks*	*Total*
TOTAL LOAD CARRIED(a) *(million tonnes)*				
New South Wales	44	306	223	573
Victoria	40	248	261	549
Queensland	34	223	246	503
South Australia	13	65	91	169
Western Australia	29	129	241	400
Tasmania	3	26	15	43
Northern Territory	1	12	16	29
Australian Capital Territory	3	9	2	13
Australia	**167**	**1 018**	**1 094**	**2 280**
AVERAGE LOAD CARRIED PER TRIP(b) *(kilograms)*				
New South Wales	389	6 147	21 569	3 300
Victoria	336	5 492	21 603	3 138
Queensland	368	5 096	25 812	3 477
South Australia	430	4 914	23 092	3 507
Western Australia	464	6 057	34 698	4 354
Tasmania	310	6 853	21 260	3 247
Northern Territory	276	4 423	31 278	3 497
Australian Capital Territory	369	5 272	19 138	1 442
Australia	**381**	**5 611**	**24 801**	**3 433**

(a) Calculated by multiplying the total weight carried by the number of laden trips.

(b) Calculated using the total load carried divided by the total number of laden trips.

17 FREIGHT VEHICLE USE, Commodity(a)—Total tonnes carried (million)(b)(c)

	Light commercial vehicles	*Rigid trucks*	*Articulated trucks*	*Total*
Food and live animals	*7	83	239	329
Beverages and tobacco	*1	*10	17	27
Crude materials, inedible, except fuels	3	418	309	730
Mineral fuels, lubricants and related materials	**4	*26	78	108
Animal and vegetable oils, fats and waxes	**1	*1	*6	*8
Chemicals and related products, not elsewhere specified	*8	9	22	39
Manufactured goods	12	130	162	304
Machinery, transport equipment	*13	49	77	140
Miscellaneous manufactured articles	**3	19	15	37
Tools of trade	94	55	4	153
Other commodities, not elsewhere specified	*12	196	140	349
Unspecified(d)	*9	*23	*24	56
Total	**167**	**1 018**	**1 094**	**2 280**

* estimate has a relative standard error of 25% to 50% and should be used with caution

** estimate has a relative standard error greater than 50% and is considered too unreliable for general use

(a) Based on the sectional groupings of the Australian Transport Freight Commodity Classification, with the addition of Tools of Trade.

(b) Calculated using number of weeks used for business multiplied by the number of trips per week multiplied by the average load.

(c) Number of weeks used for business may be affected by the change in reporting period. Refer to Technical Note 24 for more information.

(d) Represents loads carried where type of commodity could not be obtained.

18 BUS USE(a), Type of bus—Type of service

	Route service	*Dedicated school bus service*	*Charter service*	*Tour service*	*Other*	*Not specified*(b)	*Total*
TOTAL KILOMETRES TRAVELLED *(million)*							
Buses with fewer than 20 seats	*80	48	231	*25	389	**71	845
Buses with 20 or more seats	865	365	183	74	*97	**9	1 595
Total	**946**	**413**	**415**	**99**	**487**	***81**	**2 440**
AVERAGE KILOMETRES TRAVELLED(c) *('000)*							
Buses with fewer than 20 seats	*38.0	11.3	43.4	31.8	18.8	*40.8	27.2
Buses with 20 or more seats	56.2	19.6	20.4	38.0	15.0	*55.9	40.0
Total	**54.0**	**18.1**	**29.0**	**36.2**	**17.9**	***42.1**	**34.4**

* estimate has a relative standard error of 25% to 50% and should be used with caution

** estimate has a relative standard error greater than 50% and is considered too unreliable for general use

(a) Excluding distance travelled by buses used exclusively for private purposes.

(b) Represents travel by buses where type of service could not be obtained.

(c) Average distance travelled for registered vehicles which were used. Excludes registered vehicles that did not travel during the reference period.

19 BUS USE(a), State/territory of registration—Type of service

	Route service	*Dedicated school bus service*	*Charter service*	*Other*(b)	*Not specified*(c)	*Total*
TOTAL KILOMETRES TRAVELLED *(million)*						
New South Wales	244	149	*127	97	**49	665
Victoria	252	78	61	144	**15	549
Queensland	206	95	153	146	**8	607
South Australia	77	*22	*10	*27	**5	142
Western Australia	103	47	*47	110	**1	307
Tasmania	21	10	*10	11	**1	52
Northern Territory	np	np	np	np	np	np
Australian Capital Territory	np	np	np	np	np	np
Australia	**946**	**413**	**415**	**586**	***81**	**2 440**
AVERAGE KILOMETRES TRAVELLED (d) *('000)*						
New South Wales	42.5	17.3	32.1	15.8	**73.1	34.6
Victoria	72.0	17.3	18.0	20.9	*36.1	34.9
Queensland	61.7	20.9	43.0	20.2	*30.5	38.8
South Australia	49.7	16.3	*17.7	15.2	*13.7	30.5
Western Australia	48.0	21.0	25.3	21.6	**6.4	30.0
Tasmania	52.1	12.5	*18.8	13.1	**68.8	25.5
Northern Territory	59.4	16.6	8.7	28.0	**22.5	32.3
Australian Capital Territory	np	np	np	np	np	np
Australia	**54.0**	**18.1**	**29.0**	**19.6**	***42.1**	**34.4**

* estimate has a relative standard error of 25% to 50% and should be used with caution

** estimate has a relative standard error greater than 50% and is considered too unreliable for general use

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Excluding distance travelled by buses used exclusively for private purposes.

(b) Includes tour service operations.

(c) Represents travel by buses where type of service could not be obtained.

(d) Average distance travelled for registered vehicles which were used. Excludes registered vehicles that did not travel during the reference period.

EXPLANATORY NOTES

INTRODUCTION

1 This publication presents estimates from the 2012 Survey of Motor Vehicle Use (SMVU). The data were collected in three seperate reference periods by the Australian Bureau of Statistics (ABS) between 1 July 2011 and 30 June 2012.

SCOPE AND FRAME

2 The scope of the survey comprises all vehicles that were registered with a motor vehicle authority for road use at some stage during the 12 months ended 30 June 2012. Not included are caravans, trailers, tractors, plant and equipment, vehicles belonging to the defence services and vehicles with diplomatic or consular plates. Where they were registered as such, vintage and veteran cars were also excluded from the survey. Unregistered vehicles are out of scope.

3 The population of vehicles was identified on 31 January 2011 using information obtained from the state and territory motor vehicle registration authorities, as part of the annual ABS Motor Vehicle Census (MVC) (cat. no. 9309.0). There were 16.4 million vehicles identified at this time, an increase of 4.5% from 31 March 2009 when the population was identified for SMVU 2010. The population information identified is referred to as the survey frame.

METHODOLOGY

4 For the 2012 SMVU, a sample of 16,000 vehicles was selected for inclusion in the survey. The sample consisted of passenger vehicles or motor cycles (23.9%), freight vehicles (60.9%), buses (11.4%) and non-freight carrying vehicles (3.8%). The sample size was chosen to give a suitable level of reliability for estimates of total distance travelled and tonne-kilometres travelled for each state/territory of registration by type of vehicle category.

5 Owners of vehicles selected in the survey were mailed early advice about their inclusion to encourage record keeping and minimise reliance on recall. Owners were asked to complete two paper questionnaires tailored to their vehicle type. The first, at the beginning of the survey period, asked for selected vehicle characteristics and the vehicle odometer reading. Owners were also advised that they would receive a follow up questionnaire at the end of the period seeking details about the use of the vehicle over the four month period and a second odometer reading. Examples of the main items requested in the second questionnaire were included with the first questionnaire. (Sample questionnaires can be found under the 'downloads' tab on the ABS website).

6 When questionnaires were returned to the ABS they were checked for completeness and accuracy and, where possible, follow-up contact was made with owners to resolve reporting problems. Where contact with owners could not be made, missing items on incomplete questionnaires were filled by using data from like vehicles for which data were obtained.

7 Where the selected vehicle owner had not owned the vehicle for the whole four month survey period, the usage details provided for the period of ownership were adjusted to give a four-month equivalent. Where the vehicle was deregistered during the four month survey period, only usage up to the date of deregistration was included.

8 In addition, adjustments were made in the estimation process to account for the use of new motor vehicles registered after the survey population was identified, as well as the re-registration of other vehicles during this time. More information about these adjustments is provided in paragraph 26 of the Technical Note.

9 Estimates from information reported in each four month collection period were produced and these were then aggregated into annual estimates relating to the use of vehicles during the period 1 July 2011 to 30 June 2012.

RELIABILITY OF ESTIMATES

10 When interpreting the results of a survey it is important to take into account factors that may affect the reliability of estimates. Such factors can be classified as either survey methodology, sampling error or non-sampling error. Information on these factors is provided in the Technical Note.

COMPARISON WITH MOTOR VEHICLE CENSUS DATA

11 Survey estimates of the numbers of vehicles, by vehicle type, are not fully comparable with ABS Motor Vehicle Census data (see Motor Vehicle Census, Australia (cat. no. 9309.0)). The main differences are:

- survey estimates of the numbers of vehicles relate to the average number of vehicles registered for road use during the period 1 July 2011 to 30 June 2012, not to the number of vehicles registered at a specific date, as is the case for the Motor Vehicle Census
- characteristics of the vehicle reported in the survey information may differ from those recorded by the motor vehicle registries.

CONCEPT OF AVERAGES

12 Most tables in this publication include statistics presented as averages. Tables 1, 3 and 4 are summary tables and present average kilometres travelled per vehicle for all registered vehicles in scope of the survey. This includes those vehicles that did not travel during the reference period (also known as nil use vehicles). See paragraph 29 of the Technical Note for more details on nil use vehicles. Other tables present more detailed information on actual vehicle use where the denominator used in calculating the average is limited to the estimated number of vehicles that contribute to the particular table cell. In some cases a vehicle may contribute to more than one cell in a table (e.g. a bus used for route service and charter purposes) but will only be counted once in the denominator for the total.

13 As the denominators used to calculate each average are different it should be noted that the averages along a table row cannot be used to derive the total column entry for that row.

HISTORICAL COMPARISONS

14 This publication includes estimates of vehicle use for earlier years. However, it should be noted that the survey was designed to produce reliable estimates of key data items for a point in time, not for year-to-year changes. As such, changes in data over time may be subject to high RSEs and may not be statistically significant. While the analysis in this publication does make comparisons over time, the limitations as outlined above should be taken into account and care should be taken in drawing inferences from these comparisons. See paragraphs 9, 10, 11 and 12 of the Technical Note.

BILLION

15 The term 'billion' means 'thousand million' in line with Australian standards.

RELATED PUBLICATIONS AND PRODUCTS

16 Users may also wish to refer to the following publications and products which contain information relating to motor vehicles in Australia:

Motor Vehicle Census, Australia (cat. no. 9309.0)
Sales of New Motor Vehicles, Australia (cat. no. 9314.0)
Information Paper: Changes to the Survey of Motor Vehicle Use (cat. no. 9208.0.55.006)

ABS DATA AVAILABLE ON REQUEST

17 As well as the statistics included in this publication, the ABS has other relevant data available on request. Inquiries should be made to the National Information and Referral Service on 1300 135 070.

DATA QUALITY

1 When interpreting the results of a survey it is important to take into account factors that may affect the reliability of estimates. The survey procedures as well as sampling and non-sampling errors should be considered. Examination of the following quality indicators will assist users in determining fitness for purpose of the Survey of Motor Vehicle Use (SMVU).

SAMPLING ERROR

2 Estimates in this publication are based on information collected for a sample of registered motor vehicles, rather than a full enumeration, and are therefore subject to sampling error. They may differ from the data that would have been produced if the information had been obtained for all registered motor vehicles. Examples of the sampling error for this publication are included in this Technical Note.

3 The sampling error associated with an estimate can be estimated from the sample results. One measure of sampling error is given by the standard error, which indicates the extent to which an estimate might have varied by chance because only a sample of vehicles was included. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all vehicles had been included, and about 19 chances in 20 that the difference will be less than two standard errors.

4 Another measure of sampling variability is the relative standard error (RSE) which is obtained by expressing the standard error as a percentage of the estimate to which it refers. The RSE is a useful measure in that it provides an immediate indication of the percentage error likely to have occurred due to sampling. In this publication, estimates with an RSE between 25% and 50% are annotated with the symbol '*', indicating that the estimate should be used with caution as it is subject to sampling variability too high for most practical purposes. Estimates with an RSE greater than 50% are annotated with the symbol '**' indicating that the sampling variability causes the estimates to be considered too unreliable for general use.

5 The RSEs relating to 2012 estimates contained in Table 4 of this publication are shown in the following table.

RSE OF MOTOR VEHICLE USE(a), State/territory of registration—Type of vehicle

	Passenger vehicles	*Motor cycles*	*Light commercial vehicles*	*Rigid trucks*	*Articulated trucks*	*Non-freight carrying trucks*	*Buses*	*Total*
	%	%	%	%	%	%	%	%
TOTAL KILOMETRES TRAVELLED								
New South Wales	5.6	14.4	7.9	6.0	4.7	22.0	8.5	4.4
Victoria	5.6	15.9	7.6	7.1	4.8	21.4	9.2	4.4
Queensland	8.1	19.3	8.9	7.6	5.2	20.8	7.9	5.8
South Australia	6.0	25.6	8.8	6.6	3.7	21.4	9.3	4.7
Western Australia	8.4	26.0	7.0	9.6	4.7	23.6	6.9	5.9
Tasmania	5.6	17.6	6.7	6.7	6.9	19.4	11.6	4.2
Northern Territory	6.2	18.6	6.8	12.1	11.8	np	np	4.0
Australian Capital Territory	7.1	25.1	11.9	5.7	9.9	np	np	4.6
Australia	**3.0**	**8.2**	**3.7**	**3.1**	**2.2**	**9.9**	**3.8**	**2.3**
NUMBER OF VEHICLES								
New South Wales	1.6	4.5	2.0	1.8	1.9	19.3	3.9	1.3
Victoria	1.4	2.5	1.6	2.2	2.8	6.4	3.6	1.1
Queensland	1.9	3.6	3.1	1.6	1.8	12.7	3.1	1.4
South Australia	1.9	8.2	2.9	5.3	2.1	11.1	8.2	1.6
Western Australia	1.9	4.0	3.4	2.2	3.3	12.5	3.3	1.5
Tasmania	1.9	2.7	2.7	1.5	3.9	7.3	5.0	1.3
Northern Territory	2.2	5.8	4.3	10.2	3.6	np	np	1.7
Australian Capital Territory	2.3	6.6	5.0	2.0	5.2	np	np	2.0
Australia	**0.7**	**1.7**	**1.1**	**1.0**	**1.2**	**5.1**	**1.7**	**0.5**
AVERAGE KILOMETRES TRAVELLED								
New South Wales	5.6	13.8	7.7	5.8	4.3	14.9	8.0	4.4
Victoria	5.5	16.1	7.4	6.4	5.1	20.5	8.8	4.3
Queensland	7.8	18.7	8.2	7.5	5.1	17.0	7.5	5.6
South Australia	5.9	24.2	8.9	8.0	3.9	18.2	8.7	4.6
Western Australia	8.0	25.6	6.4	8.5	5.2	20.3	6.4	5.7
Tasmania	5.3	17.3	6.6	6.6	7.0	19.0	11.2	4.0
Northern Territory	5.8	18.0	6.9	7.5	11.2	15.9	10.5	3.9
Australian Capital Territory	6.5	23.9	10.9	5.8	9.3	21.4	np	5.6
Australia	**3.0**	**8.1**	**3.6**	**3.0**	**2.3**	**8.4**	**3.7**	**2.2**

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) These RSEs relate to the estimates in Table 4.

SAMPLING ERROR *continued*

6 As an example of the use of an RSE, the 2012 estimate for total kilometres travelled by passenger vehicles registered in Australia is 167,456 million kilometres (Table 4 of the publication). The rounded RSE for this estimate is 3.0%, as shown above. Therefore, the standard error for the estimated total kilometres travelled by passenger vehicles is 5,024 million kilometres (3.0% of 167,456 million kilometres). There are about two chances in three that the figure obtained if all vehicles had been included, would have been in the range 162,432 million kilometres to 172,480 million kilometres (a range of one standard error above and below the survey estimate). There are about 19 chances in 20 that the figure would have been in the range 157,408 million kilometres to 177,504 million kilometres (a range of two standard errors above and below the survey estimate).

7 It is important to note that estimates at more detailed levels than the above are subject to higher RSEs and therefore are less reliable.

8 RSEs for other key estimates are shown in the following tables. RSEs of other estimates can be made available on request.

RSE OF FUEL CONSUMPTION(a), Type of fuel—Type of vehicle

	Passenger vehicles	*Motor cycles*	*Light commercial vehicle*	*Rigid trucks*	*Articulated trucks*	*Non-freight carrying trucks*	*Buses*	*Total*
	%	%	%	%	%	%	%	%
TOTAL FUEL CONSUMPTION								
Petrol	3.8	8.0	7.7	33.0	—	31.7	21.0	3.3
Diesel	14.7	—	6.2	3.4	2.3	9.3	4.3	2.8
Other(b)	20.0	—	26.4	46.8	39.3	57.9	13.4	14.6
Total	**3.4**	**8.0**	**3.9**	**3.3**	**2.3**	**9.2**	**3.7**	**2.1**
AVERAGE RATE OF FUEL CONSUMPTION								
Petrol	1.3	2.0	2.3	9.8	—	12.3	3.4	1.2
Diesel	4.4	—	1.5	1.9	0.8	4.7	2.3	2.3
Other(b)	7.7	—	7.5	35.4	17.2	25.8	9.4	5.5
Total	**1.3**	**2.0**	**1.5**	**1.9**	**0.8**	**4.6**	**2.2**	**0.9**

— nil or rounded to zero (including null cells)

(a) These RSEs relate to the estimates in Table 5.

(b) Other fuel type includes LPG, CNG, Dual fuel, hybrid and other.

RSE OF FREIGHT VEHICLES(a), State/territory of operation

	Light commercial vehicles	*Rigid trucks*	*Articulated trucks*	*Total*
	%	%	%	%
TOTAL TONNE-KILOMETRES				
New South Wales	19.5	9.7	5.4	4.4
Victoria	14.2	12.3	5.8	5.1
Queensland	20.3	10.6	7.0	5.8
South Australia	15.5	11.7	6.2	5.3
Western Australia	22.4	11.5	6.0	5.2
Tasmania	22.5	11.0	10.3	7.4
Northern Territory	16.1	26.7	16.5	14.4
Australian Capital Territory	24.9	19.9	27.4	14.3
Australia	**9.0**	**5.1**	**2.9**	**2.4**

(a) These RSEs relate to the estimates in Table 13.

SAMPLING ERROR *continued*

9 Summary tables in this publication contain estimates for earlier years.

10 The standard error for the movement between two years can be approximated using the following formula $SE(M_t) = \sqrt{(RSE(Y_{2t}) * Y_{2t}/100)^2 + (RSE(Y_{1t}) * Y_{1t}/100)^2}$ where

Y_{1t} is an estimate of total of the variable of interest, obtained from the 1st time point

Y_{2t} is an estimate of total of the same variable of interest, obtained from the 2nd time point

M_t is an estimate of movement of the total of the variable of interest from the 1st time point to the 2nd time point, ie $M_t = Y_{2t} - Y_{1t}$

11 For total kilometres travelled by type of vehicle from the 2007 and 2012 SMVUs, the standard errors of the movements and the estimates from which they are derived are shown in the following table.

SE OF THE MOVEMENT OF TOTAL KILOMETRES TRAVELLED—2007 and 2012(a)

	LEVEL ESTIMATES				MOVEMENT ESTIMATES	
	2007	*RSE (2007)*	*2012*	*RSE (2012)*	*Movement*	*SE (Movement)*(b)
	mill.	%	mill.	%	mill.	mill.
Type of vehicle						
Passenger vehicles	157 928	2	167 456	3	9 528	6 161
Motor cycles	1 905	10	1 882	8	–22	238
Light commercial vehicles	37 385	3	43 716	4	6 331	1 954
Rigid trucks	8 644	3	9 258	3	615	380
Articulated trucks	6 929	2	7 381	2	451	220
Non-freight trucks	283	12	243	10	–41	41
Buses	2 097	4	2 516	4	419	131
Total	**215 171**	**2**	**232 453**	**2**	**17 281**	**6 426**

(a) Data for 2007 are for 12 months ended 31 October. Data for 2012 are for 12 months ended 30 June.
(b) Calculated on unrounded RSE estimates.

12 As indicated in the table above, the estimates of movement are subject to significant sampling error and caution should be used when making inferences about change. For example, the estimate of movement for passenger vehicles is an increase of 9,528 million kilometres and the standard error is 6,161 million kilometres, which means there are 19 chances in 20 that the true movement is between a decrease of 2,794 million kilometres and an increase of 21,850 million kilometres (a range of two standard errors above and below the movement estimate).

NON-SAMPLING ERROR

13 Non-sampling error covers the range of errors that are not caused by sampling and can occur in any statistical collection whether it is based on full enumeration or a sample. For example, non-sampling error can occur because of non-response to the statistical collection, errors or omissions in reporting, definition or classification difficulties, errors in transcribing and processing data and under-coverage of the frame from which the sample was selected. If these errors are systematic (not random) then the survey results will be distorted in one direction and therefore will be unrepresentative of the target population. Systematic errors result in bias.

Response and non-response

14 An important factor that affects non-sampling error is the response rate achieved. The ABS makes all reasonable efforts to maximise response rates. Where appropriate, mail reminders and telephone follow-up are used to attempt to contact non-responding vehicle owners. Responses were received from 84% of all of the selections for 2012.

RESPONSE AND NON-RESPONSE BY CATEGORY

	Percentage of selections 2012
	%
Response received	
Registered vehicle	81
Unregistered vehicle(a)	3
Non-response	
Untraceable - mailing address unknown	4
Other(b)	11
Total selections	**100**

(a) Includes deregistration, out of scope and duplicates.

(b) Includes: responses that were unusable because of unresolved queries or where the vehicle was sold during the reference third and the reported data covered less than 14 days; non-response where no listing could be found to enable contact by telephone; and owner contacted by telephone but response still not secured.

15 After removing those vehicles that had been found to be deregistered or out of scope, the response rate for the 2012 SMVU was 84%.

16 Response rates for each state and territory, and for each vehicle type, are shown in the following tables:

RESPONSE RATES, State/Territory

	Response rate
	%
New South Wales	87
Victoria	84
Queensland	86
South Australia	86
Western Australia	86
Tasmania	86
Northern Territory	77
Australian Capital Territory	81
Australia	**84**

Response and non-response continued

RESPONSE RATES, Type of vehicle

	Response rate
	%
Type of vehicle	
Passenger vehicle	81
Motor cycles	79
Light commercial vehicles	82
Rigid trucks	84
Articulated trucks	87
Non-freight carrying trucks	89
Buses	86
Total	**84**

17 Non-response has the potential to cause non-response bias, which occurs if the usage patterns of the non-responding vehicles differ from those of the responding vehicles. For the SMVU, it is assumed that the characteristics of non-responding vehicles are the same as for responding vehicles.

Frame quality

18 The scope of the survey comprises all vehicles that were registered with a motor vehicle authority for road use at some stage during the 12 months ended 30 June 2012 (excluding caravans, trailers, tractors, plant and equipment, defence services vehicles, diplomatic or consular-plated vehicles and vintage or veteran registered vehicles). A population or survey frame of 16.4 million vehicles was identified on 31 January 2011 using information obtained from the state and territory motor vehicle registration authorities, as part of the annual ABS Motor Vehicle Census (MVC) (cat. no. 9309.0). From this frame a stratified sample of 16,000 vehicles was selected for reporting on vehicle use.

19 In 2012, the effects of duplicate vehicle registrations, vehicle de-registrations prior to frame extract, and out-of-scope vehicles on the frame was estimated to be approximately 0.4% of the total frame. This indicates the frame was reliable in terms of providing an accurate number of registered vehicles in Australia.

20 Vehicle classification anomalies arise when respondents indicate an alteration has been made to the vehicle body, resulting in a different vehicle type to that recorded on the frame. These changes can happen during the time-lag between finalising the frame and collection of SMVU data (between 5 and 17 months). Vehicle classification anomalies can also result from data supplied by state and territory vehicle registration authorities. An assessment of vehicle classification anomalies from 2012 data shows that while there was no bias towards specific states or territories, there were marked discrepancies for some vehicle types. For vehicles on the frame that were listed as non-freight carrying trucks, 23.7% were found to be other vehicle types and 13.7% of vehicles listed as buses were found to be other vehicle types. This issue was not significant for other vehicle types on the frame.

Imputation

21 Imputation is the process whereby a value is generated for missing data items, based on the responses for similar vehicles which were operating for the reference period. This is called partial imputation. As for previous surveys, the need for imputation of unanswered items on the returned questionnaires remained quite high.

22 Additional imputation is needed due to questionnaire non-response and is called full imputation. The tables below show the percentage contribution to the estimates from both partial and full imputation.

Imputation continued

CONTRIBUTION TO ESTIMATES FROM IMPUTATION(a), State/territory of registration

	Percentage of total kilometres travelled	*Percentage of total tonne-kilometres travelled*	*Percentage of fuel consumption*
	%	%	%
New South Wales	17	21	38
Victoria	17	29	42
Queensland	16	24	39
South Australia	15	21	36
Western Australia	16	26	39
Tasmania	18	30	44
Northern Territory	26	23	50
Australian Capital Territory	19	43	37
Australia	**17**	**25**	**39**

(a) Includes both partial and full imputation

CONTRIBUTION TO ESTIMATES FROM IMPUTATION(a), Type of vehicle

	Percentage of total kilometres travelled	*Percentage of total tonne-kilometres travelled*	*Percentage of fuel consumption*
	%	%	%
Passenger vehicles	16	. .	41
Motor cycles	16	. .	38
Light commercial vehicles	18	42	44
Rigid trucks	15	28	38
Articulated trucks	14	23	28
Non-freight carrying vehicles	11	. .	37
Buses	10	. .	20
Total	**17**	**25**	**39**

. . not applicable

(a) Includes both partial and full imputation

SURVEY PROCEDURES

23 The survey is comprised of three independent samples, with a different one used for each four month period in the overall 12 month survey period. Estimates from each of these samples are aggregated and adjusted for new motor vehicles and re-registrations of vehicles to produce an annual estimate.

Four month collection period

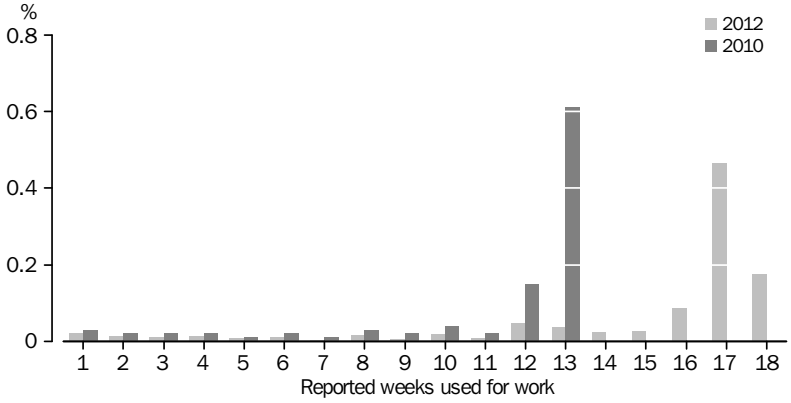
24 The 2012 SMVU was the first to collect information in three periods. Previous surveys have been collected in quarters. The change may have impacted on the estimates. For example:

1. With a longer reporting period, it is expected fewer vehicles will report nil use for a full period. For more information see Paragraph 29 of the Technical Note.
2. Freight vehicle owners are asked to report the number of weeks the vehicle was used for work purposes. Comparisons with 2010 SMVU data suggest that it is possible that respondents may have reported 12 or 13 weeks if the vehicle was used every week during the survey period, rather than the 17 or 18 weeks. This may be because:
   - respondents who have completed previous SMVU continuing to report 12 or 13 weeks from habit, or

Four month collection period continued

- respondents believing/assuming the reporting period covers three months as this is common practise both within the ABS and wider community.

REPORTED WEEKS USED FOR WORK, Proportion of responses—Years ended 31 October 2010 and ended June 30 2012



Proportion of respondents reporting each week in 2010 and 2012.

25 Number of weeks used for work is used in the calculation of total tonnes in Table 2 and Table 17. As it is not possible to separate mis-reported and correct responses, no adjustments have been made to the data. The ABS will continue to monitor the impacts of this change in future surveys.

Adjustments

26 The SMVU aims to measure the use of all vehicles registered during the reference year. Because selections are taken from vehicles registered some time before the beginning of each collection period, adjustments are made to account for the change in size of the registered motor vehicle fleet since the population frame was created. For the 2012 SMVU, the frame was created on 31 January 2011. These adjustments involved two categories:

- re-registrations - older vehicles that are returning to the registered vehicle fleet after a period of de-registration, and
- new motor vehicles - vehicles which have not been previously registered.

Adjustments continued

CONTRIBUTION OF ADJUSTMENTS FOR RE-REGISTRATIONS, Australia—2005-07, 2010 and 2012(a)

	PERCENTAGE OF TOTAL KILOMETRES TRAVELLED				
	SMVU 2005	*SMVU 2006*	*SMVU 2007*	*SMVU 2010*	*SMVU 2012*
	%	%	%	%	%
Type of Vehicle					
Passenger vehicles	3	1	3	2	1
Motor cycles	4	7	7	8	7
Light commercial vehicles	1	3	2	2	2
Rigid trucks	2	4	2	3	3
Articulated trucks	4	2	4	4	4
Non-freight carrying vehicles	1	3	2	6	1
Buses	–2	—	–2	6	5
Total	**3**	**2**	**3**	**2**	**1**

— nil or rounded to zero (including null cells)

(a) Data for 2005-07, 2010 are for 12 months ended 31 October. Data for 2012 are for 12 months ended 30 June.

27 These activities occur continuously and the adjustments are made to account for the registrations that are estimated to have been added to or removed from the registered vehicle fleet between the population frame date and the end of the reference period. The adjustment process also accounts for de-registrations. This means it is possible for the re-registration factor to be negative.

CONTRIBUTION OF NEW VEHICLES REGISTERED AFTER FRAME CREATION—2005-07, 2010 and 2012(a)

	PERCENTAGE OF TOTAL KILOMETRES TRAVELLED				
	2005	*2006*	*2007*	*2010*	*2012*
Type of vehicle					
Passenger vehicles	11	11	10	9	7
Motor cycles	16	16	15	11	9
Light commercial vehicles	14	14	14	10	8
Rigid trucks	12	12	12	8	6
Articulated trucks	19	20	17	11	9
Non-freight carrying trucks	14	14	9	8	13
Buses	15	15	16	5	5
Total	**12**	**12**	**11**	**9**	**7**

(a) Data for 2005-07, 2010 are for 12 months ended 31 October. Data for 2012 are for 12 months ended 30 June.

Pre-advice methodology

28 The quality of survey responses is improved by employing a pre-advice methodology. This involves vehicle owners receiving early advice about their inclusion in the survey and encourages a higher degree of record keeping. In addition, the reporting of odometer readings taken at the start and end of the survey periods (approximately four months apart) provide reliable estimates of total distance travelled without a recall bias.

Nil use

29 Some providers may report nil use for the 4 month reference period in which they were selected. Nil use vehicles are registered vehicles that report no travel during that specific reference period. Nil use vehicles are included in the survey as their reported nil use is representative of other vehicles in the population. Vehicles may have nil use due to factors such as seasonal usage, mechanical faults or economic conditions. Where a provider gives a nil use response, a follow-up phone call is used to check the veracity of the response.

NIL USE, Vehicle type—2005-07, 2010 and 2012(a)

	2005	*2006*	*2007*	*2010*	*2012*
NUMBER OF REGISTERED VEHICLES WITH NIL USE					
Passenger vehicles	393 971	409 471	456 884	561 613	479 179
Motor cycles	73 570	100 725	125 547	148 217	182 308
Light commercial vehicles	103 683	115 841	114 241	122 227	71 292
Rigid trucks	32 944	36 263	36 660	34 647	36 549
Articulated trucks	4 105	4 340	3 680	5 165	6 162
Non-freight carrying trucks	1 518	1 448	1 418	2 424	3 157
Buses	1 303	1 343	1 510	2 831	1 809
Total	**611 094**	**669 430**	**739 940**	**877 123**	**780 455**
PROPORTION OF REGISTERED VEHICLES WITH NIL USE (%)					
Passenger vehicles	4	4	4	5	4
Motor cycles	17	22	25	23	26
Light commercial vehicles	5	6	5	5	3
Rigid trucks	9	9	9	8	8
Articulated trucks	6	6	5	6	7
Non-freight carrying trucks	8	7	7	11	15
Buses	2	2	2	4	2
Total	**4**	**5**	**5**	**6**	**5**

(a) Data for 2005-07, 2010 are for 12 months ended 31 October. Data for 2012 are for 12 months ended 30 June.

DISTRIBUTIONS

30 The following tables provide values for total kilometres travelled and total tonne-kilometres travelled for selected percentiles. These percentiles have been calculated from all values reported in each third of the reference period. Percentiles provide some indication of the distribution of vehicle use across the survey population. For example, one-fifth of New South Wales passenger vehicles reported a distance travelled of 1,399 kilometres or less for the third they were selected in the survey. Note that the minimum value for every combination of state/territory by type of vehicle for both tables is zero.

31 Users should contact the ABS if they have any queries on the quality and reliability of estimates for particular purposes.

SELECTED PERCENTILES(a), State/territory of registration—Type of vehicle

	20th Percentile	*40th Percentile*	*50th Percentile*	*60th Percentile*	*80th Percentile*	*95th Percentile*	*99th Percentile*
	TOTAL KILOMETRES TRAVELLED						
Passenger vehicles							
New South Wales	1 399	2 604	3 226	4 163	6 703	9 507	23 687
Victoria	1 807	2 798	3 395	4 245	6 344	11 550	17 803
Queensland	1 372	3 159	3 845	4 872	7 157	11 593	24 362
South Australia	1 374	2 740	3 515	4 076	6 150	9 693	13 253
Western Australia	1 359	2 454	3 188	4 362	6 315	10 692	18 740
Tasmania	1 214	2 138	3 057	3 815	5 715	10 833	13 988
Northern Territory	1 369	2 608	3 068	3 712	5 547	10 699	20 333
Australian Capital Territory	1 984	3 409	4 184	4 854	6 038	11 061	18 740
Australia	1 440	2 777	3 409	4 269	6 651	10 648	18 957
Motorcycles							
New South Wales	61	412	623	889	1 323	3 448	4 494
Victoria	—	207	333	593	1 587	3 571	3 745
Queensland	—	52	206	460	1 195	3 072	5 155
South Australia	42	224	387	469	1 569	5 173	5 775
Western Australia	—	25	179	448	1 597	5 130	7 475
Tasmania	—	149	350	603	1 767	4 522	5 544
Northern Territory	14	498	634	1 021	1 710	3 355	6 366
Australian Capital Territory	18	232	358	502	1 851	4 805	5 221
Australia	—	179	356	588	1 424	3 745	6 534
Light commercial vehicles							
New South Wales	2 198	3 641	4 311	5 655	9 322	19 011	26 246
Victoria	1 519	3 704	4 741	5 839	9 963	13 429	27 510
Queensland	1 268	2 833	3 593	5 042	7 594	13 548	22 140
South Australia	1 600	3 222	3 891	4 751	8 715	14 122	20 755
Western Australia	1 120	3 329	4 613	5 952	9 233	14 289	18 867
Tasmania	785	2 313	3 037	3 667	6 199	11 659	19 778
Northern Territory	910	2 782	3 647	5 081	7 272	12 398	20 287
Australian Capital Territory	3 118	4 491	5 195	6 025	10 251	17 428	43 957
Australia	1 421	3 310	4 191	5 464	8 676	14 333	25 861
Rigid trucks							
New South Wales	726	2 765	3 986	5 318	11 122	23 579	42 453
Victoria	396	3 075	4 974	6 871	11 660	20 372	40 743
Queensland	391	2 591	4 561	6 406	11 089	24 681	47 815
South Australia	264	2 026	3 418	5 182	10 161	21 610	41 236
Western Australia	193	1 422	3 024	5 031	10 593	27 450	42 011
Tasmania	291	1 805	3 213	4 373	8 078	21 788	39 988
Northern Territory	1 121	2 406	3 537	5 104	7 673	14 562	28 116
Australian Capital Territory	2 508	4 911	6 218	7 254	11 769	23 356	44 053
Australia	427	2 591	4 236	5 974	11 089	23 137	42 011
Articulated trucks							
New South Wales	2 907	12 736	16 795	27 443	48 734	72 817	90 350
Victoria	1 801	12 176	17 664	25 840	52 231	79 116	120 590
Queensland	5 923	16 556	22 822	35 348	60 780	87 873	100 742
South Australia	2 548	9 654	14 764	21 673	48 609	80 725	117 489
Western Australia	867	10 613	15 127	22 667	44 645	79 728	125 803
Tasmania	2 344	10 699	17 312	25 342	41 669	59 576	135 717
Northern Territory	382	4 987	10 613	16 074	45 585	71 755	104 388
Australian Capital Territory	5 838	21 673	30 892	41 450	61 016	69 762	138 345
Australia	2 531	12 736	18 004	26 974	50 650	79 394	109 570

— nil or rounded to zero (including null cells)

(a) Based on distance travelled in a four month reference period

SELECTED PERCENTILES(a), State/territory of registration—Type of vehicle *continued*

	20th Percentile	*40th Percentile*	*50th Percentile*	*60th Percentile*	*80th Percentile*	*95th Percentile*	*99th Percentile*
	TOTAL KILOMETRES TRAVELLED						
Non-freight carrying trucks							
New South Wales	965	2 689	3 586	4 064	8 408	12 769	14 291
Victoria	280	659	1 000	1 453	5 027	22 408	27 852
Queensland	260	2 043	2 989	4 365	9 732	18 009	22 908
South Australia	245	677	790	1 046	3 554	10 037	15 073
Western Australia	—	220	390	716	5 798	15 204	17 490
Tasmania	87	430	639	990	3 371	14 248	20 119
Northern Territory	np	np	np	np	np	np	np
Australian Capital Territory	np	np	np	np	np	np	np
Australia	136	790	1 444	2 578	6 092	15 204	22 908
Buses							
New South Wales	3 034	6 283	7 671	11 136	17 093	30 850	38 931
Victoria	2 945	5 824	6 720	8 152	17 644	36 208	54 712
Queensland	2 349	6 395	8 200	10 190	18 777	38 590	52 261
South Australia	2 326	4 779	5 618	7 491	16 877	25 783	28 481
Western Australia	1 682	4 063	6 072	8 038	15 554	26 831	44 870
Tasmania	1 646	3 659	4 790	6 062	13 029	27 664	48 468
Northern Territory	np	np	np	np	np	np	np
Australian Capital Territory	np	np	np	np	np	np	np
Australia	2 407	5 506	7 094	9 011	17 093	33 221	47 607
Total							
New South Wales	1 354	2 654	3 349	4 269	6 910	11 076	26 017
Victoria	1 436	2 772	3 409	4 383	6 869	12 071	21 488
Queensland	1 068	2 841	3 558	4 550	7 274	13 394	26 244
South Australia	1 301	2 668	3 450	4 076	6 228	10 457	24 134
Western Australia	786	2 448	3 182	4 441	7 068	11 150	24 120
Tasmania	974	1 979	2 977	3 725	5 763	11 249	17 419
Northern Territory	1 161	2 565	3 087	3 859	6 366	12 200	23 026
Australian Capital Territory	1 855	3 401	4 184	4 875	6 172	13 072	18 740
Australia	**1 265**	**2 699**	**3 409**	**4 362**	**6 927**	**11 752**	**24 362**

— nil or rounded to zero (including null cells)

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Based on distance travelled in a four month reference period

SELECTED PERCENTILES(a), State/territory of registration—Type of freight vehicle

	20th Percentile	*40th Percentile*	*50th Percentile*	*60th Percentile*	*80th Percentile*	*95th Percentile*	*99th Percentile*
	TOTAL TONNE-KILOMETRES TRAVELLED						
Light commercial vehicles							
New South Wales	—	—	—	138	1 045	7 252	23 925
Victoria	—	—	108	261	1 449	3 821	8 488
Queensland	—	—	—	61	1 008	4 148	9 255
South Australia	—	—	159	430	1 534	3 777	6 574
Western Australia	—	—	—	186	2 137	7 328	12 467
Tasmania	—	—	—	19	444	3 879	12 026
Northern Territory	—	—	—	58	750	3 676	7 700
Australian Capital Territory	—	105	194	339	2 169	8 180	16 676
Australia	—	—	**6**	**167**	**1 208**	**4 756**	**13 445**
Rigid trucks							
New South Wales	340	1 889	3 318	6 139	19 605	130 688	462 082
Victoria	113	2 935	6 109	10 529	28 840	105 376	339 684
Queensland	138	2 040	4 344	7 504	24 089	111 196	411 944
South Australia	198	2 042	5 186	9 981	23 463	95 812	313 900
Western Australia	32	1 639	3 278	6 392	22 911	89 224	180 270
Tasmania	—	1 382	3 220	6 513	23 533	106 074	418 153
Northern Territory	873	1 551	2 720	4 617	18 030	73 136	120 745
Australian Capital Territory	1 627	4 250	8 877	13 367	31 292	103 594	368 635
Australia	**169**	**2 029**	**4 126**	**7 721**	**24 891**	**108 900**	**388 474**
Articulated trucks							
New South Wales	24 019	128 660	195 126	336 035	745 581	1 646 450	2 905 247
Victoria	15 707	127 356	206 720	354 550	931 292	2 083 384	3 029 664
Queensland	40 743	196 388	341 730	517 163	1 198 081	2 433 698	3 658 534
South Australia	26 074	101 379	175 815	277 848	977 988	2 483 171	3 977 642
Western Australia	5 760	117 143	197 508	315 297	921 528	3 154 292	5 324 610
Tasmania	11 454	77 435	137 759	313 864	622 800	1 395 036	2 951 847
Northern Territory	3 327	74 319	169 808	245 788	1 212 807	3 296 376	5 055 667
Australian Capital Territory	63 695	226 667	317 756	538 561	1 039 358	1 489 110	2 515 980
Australia	**22 094**	**135 848**	**222 200**	**361 988**	**956 056**	**2 303 936**	**3 894 788**

— nil or rounded to zero (including null cells)

(a) Based on distance travelled in a four month reference period

GLOSSARY

Articulated trucks — Motor vehicles constructed primarily for load carrying, consisting of a prime mover which has no significant load carrying area, but with a turntable device which is linked to a semitrailer.

Average load carried — Average load carried is calculated by dividing the total weight carried by the number of trips made while carrying a load.

Buses — Motor vehicles constructed for the carriage of passengers. Included are all motor vehicles with 10 or more seats, including the driver's seat.

Business kilometres — Distance travelled for hire and reward, or charged to a business expense, or for which an allowance was received. All distances travelled for business purposes, irrespective of actual use, and irrespective of vehicle type, are included in total business kilometres. The laden-unladen dissection of distance travelled for business purposes relates only to freight vehicles, i.e. light commercial vehicles, rigid trucks and articulated trucks.

Business use — Use of vehicle for business, professional, farm or government purposes. It includes use for hire or reward, use which is chargeable to business expense and use for which an allowance was received. Travel to and from work is not included.

Capital city — These areas are based on capital city Statistical Divisions as defined in the *Australian Standard Geographical Classification (ASGC) 2011*.

Sydney — this includes the area bounded by Gosford and Wyong; Hawkesbury and Blue Mountains; Campbelltown, Wollondilly and the Sutherland Local Government Areas.

Melbourne — this includes the area bounded by Werribee, Melton, Sunbury, Craigieburn, Whittlesea, Healesville, Warburton, Berwick, Pakenham and the whole of Mornington Peninsula.

Brisbane — this includes the area bounded by Caboolture, the eastern part of Pine Rivers, Redcliffe, Redland, Logan, Ipswich and Wolffdene.

Adelaide — this includes the area bounded by the Gulf of St. Vincent, the Gawler River and the Mount Lofty Ranges from Gawler to Bridgewater through Kangarilla and Willunga to Sellicks Beach.

Perth — this includes the area bounded by Yanchep and Bullsbrook; Warnbro, Keysbrook and York.

Hobart — this includes the area bounded by New Norfolk; Sorell and Carlton Creek; Brighton and Snug.

Darwin — this includes Darwin and suburbs, Palmerston and other areas north of the Howard Springs turn-off.

Canberra — this includes all of the Australian Capital Territory.

Commodity carried — The publication of commodities carried is based on the 10 sectional groupings of the *Australian Transport Freight Commodity Classification (ATFCC)*, with the addition of Tools of Trade.

Freight vehicles — Consists of light commercial vehicles, rigid trucks and articulated trucks.

Fuel consumption — Fuel consumption is calculated by aggregating the total kilometres travelled multiplied by reported average rate of fuel consumption for each vehicle.

Fuel consumption (average) — The average rate of fuel consumption is calculated by dividing the total fuel consumption by total kilometres travelled for each type of vehicle.

Gross Combination Mass (GCM) — Tare weight (i.e. unladen weight) of the motor vehicle and attached trailers, plus their maximum carrying capacity. In the survey, this was obtained for vehicles operated in combination (e.g. a prime mover/semitrailer combination, or a rigid truck/trailer combination).

Gross Vehicle Mass (GVM) Tare weight (i.e. unladen weight) of the motor vehicle, plus its maximum carrying capacity. In the survey, this was obtained for buses and rigid trucks not usually towing trailers.

Interstate This refers to any travel by vehicles outside their state or territory of registration.

Laden distance Distance travelled by light commercial vehicles, rigid trucks and articulated trucks from one destination to another when carrying freight.

Light commercial vehicles Motor vehicles constructed for the carriage of goods and which are less than or equal to 3.5 tonnes GVM. Included are utilities, panel vans, cab-chassis and goods carrying vans (whether four-wheel drive or not).

Non-freight carrying trucks Specialist motor vehicles or motor vehicles fitted with special purpose equipment, and having little or no goods carrying capacity, e.g. ambulances, cherry pickers, fire trucks and tow trucks.

Other Urban Areas These are based on the *Australian Standard Geographical Classification (ASGC) 2011* as being either Statistical Districts with a population greater than 40,000 or clusters of collection districts and other urban areas with a population greater than 40,000, based on the 2006 Population Census.

New South Wales — within the areas of Newcastle, Lake Macquarie, Port Stephens, Wollongong, Kiama, Bathurst-Orange, Maitland, Albury (excluding Wodonga), Hume, Wagga Wagga, Tweed Heads (excluding Gold Coast), Queanbeyan (excluding Canberra ACT), Lismore, Coffs Harbour, Greater Taree, Tamworth, Shellharbour, Cessnock, Nelson Bay, Port Macquarie and Nowra.

Victoria — within the areas of Geelong, Ballarat, Bendigo, Wodonga (excluding Albury), Shepparton, La Trobe Valley and Mildura.

Queensland — within the areas of the Sunshine Coast, Bundaberg, Hervey Bay, Rockhampton, Mackay, Townsville, Cairns, Gold Coast (excluding Tweed Heads) Toowoomba and Gladstone.

Western Australia — within the areas of Mandurah and Bunbury.

Tasmania — within the areas of Launceston, Burnie, Devonport, Penguin, Ulverston, Wynyard and Latrobe.

This category is not applicable in South Australia, the Northern Territory and the Australian Capital Territory.

Passenger vehicles Motor vehicles constructed primarily for the carriage of persons and containing up to nine seats (including the driver's seat). Included are cars, station wagons, four-wheel drive passenger vehicles, passenger vans or mini buses with fewer than 10 seats and campervans.

Private use Travel which is not for business purposes. Travel to and from work is included.

Rigid trucks Motor vehicles exceeding 3.5 tonnes GVM, constructed with a load carrying area. Included are normal rigid trucks with a tow bar, draw bar or other non-articulated coupling on the rear of the vehicle.

Relative standard error (RSE) The standard error expressed as a percentage of the estimate to which it refers.

Standard error (SE) Indicates the extent to which an estimate might have varied by chance because only a sample of vehicles was included.

Stratification Stratification is the process where a population is divided into homogeneous groups called strata that are non-overlapping, and together comprise the whole population. This technique uses auxiliary information to increase the efficiency of a sample design and units are selected independently within each stratum.

Tonne-kilometres Total tonne-kilometres is the aggregation of the number of tonnes moved multiplied by the distance travelled in kilometres for each individual vehicle carrying freight. Note that it is not the aggregation of the total number of tonnes moved by total kilometres travelled by all vehicles carrying freight.

Tonnes carried Total tonnes carried is the total weight of goods and freight carried during the survey period. The estimate of total tonnes carried relates to goods and freight uplifted by vehicles and therefore will overstate the actual physical quantity of goods and freight moved during the survey period to the extent that transhipment occurs (i.e. the transfer of goods and freight from one vehicle to another).

Travel to and from work The travel between place of residence and place of work at the beginning and end of all working days, including travel to and from public transport stations.

Unladen distance Distance travelled by light commercial vehicles, rigid trucks and articulated trucks from one destination to another when not carrying freight.

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