



SURVEY OF MOTOR VEHICLE USE

AUSTRALIA

EMBARGO: 11.30AM (CANBERRA TIME) TUES 23 AUG 2011

C O N T E N T S

page

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I N Q U I R I E S

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 2010 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 in four quarterly sample surveys conducted by the Australian Bureau of Statistics (ABS) over the period 1 November 2009 to 31 October 2010.

RECOMMENCEMENT OF THE SURVEY OF MOTOR VEHICLE USE

This publication is the first release since the survey was discontinued in January 2008. The next survey will be conducted for the 2011-2012 financial year and then biennially (every two years). For more information refer to the Information Paper: Changes to the Survey of Motor Vehicle Use, 12 months ended 31 October 2010 (cat. no. 9208.0.55.006).

COMPARISONS WITH PREVIOUS SURVEY RESULTS

This survey has been designed to provide a measure of total distance travelled and tonne-kilometres for each state/territory of registration by type of vehicle. While comparisons are made between 2010 survey results and earlier iterations of the SMVU, the survey has not been designed to provide accurate estimates of change.

Care should be taken in drawing inferences from changes in data over time as movements may be subject to high relative standard errors and the resulting estimates of movements may not be considered 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 31 October 2010 there were an estimated 16.0 million vehicles registered in Australia compared with 14.4 million in the 12 months ended 31 October 2006.

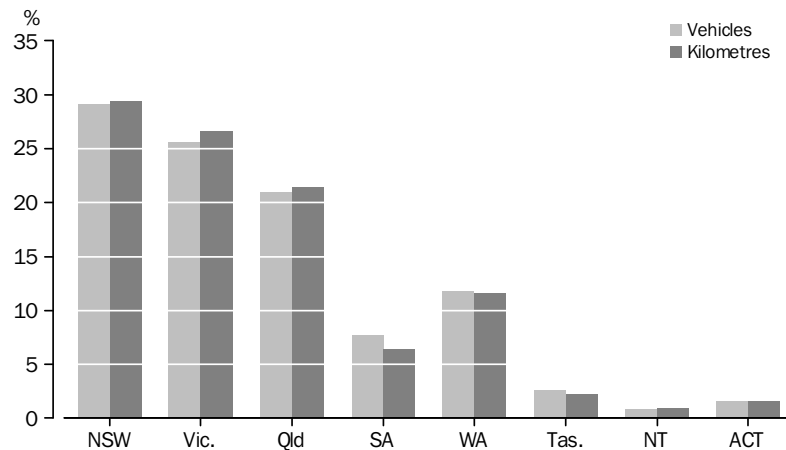
In 2010, passenger vehicles made up 76.9% of all registered vehicles, compared with 78.5% in 2006. Freight vehicles accounted for 18.4% in 2010 with the remainder (4.7%) comprising buses, motor cycles and non-freight carrying trucks. Of the freight vehicles, 82.6% were light commercial vehicles, 14.7% were rigid trucks and 2.8% were articulated trucks.

KILOMETRES TRAVELLED

Motor vehicles in Australia travelled an estimated 226,632 million kilometres in 2010. While the distance travelled increased by 8.2% compared with 2006, the number of vehicles increased by 11.8% over this time.

The state/territory proportion of total kilometres travelled is closely related to the number of registered vehicles in each state/territory. New South Wales had the largest share of total kilometres travelled (29.4%) and the largest number of registered vehicles.

PROPORTION OF VEHICLES AND TOTAL KILOMETRES TRAVELLED, State/territory of registration—Year ended 31 October 2010

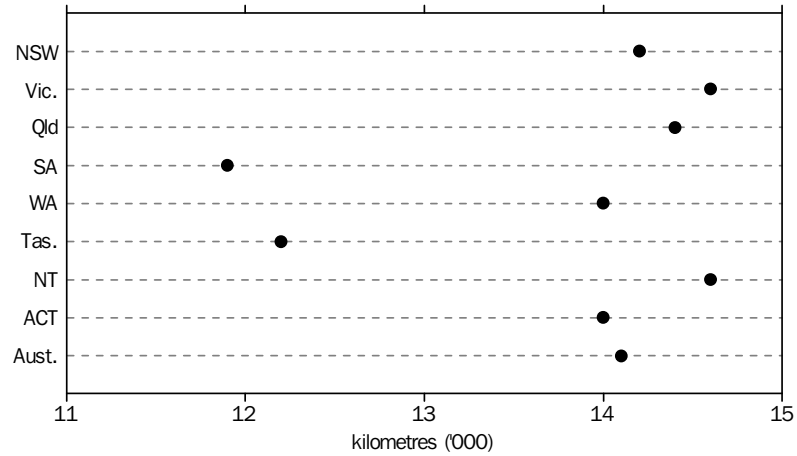


Motor vehicles registered in Australia travelled an average of 14,100 kilometres per vehicle in 2010. Vehicles registered in Victoria and Northern Territory travelled the highest number of average kilometres (14,600 kilometres), while vehicles registered in South Australia travelled the lowest number of average kilometres (11,900). Of all vehicle types, articulated trucks had the highest average kilometres (85,000).

SUMMARY OF FINDINGS *continued*

KILOMETRES TRAVELLED *continued*

AVERAGE KILOMETRES TRAVELLED, Motor vehicles by state/territory of registration—Year ended 31 October 2010



Passenger vehicles accounted for 72.1% of the total distance travelled in 2010. In comparison, the proportion travelled by passenger vehicles in 2006 was 74.6%.

Of the total kilometres travelled by passenger vehicles in 2010, 50.6% was for personal and other use. The remaining kilometres travelled by passenger vehicles comprised travel to and from work (26.8%) and business use (22.7%).

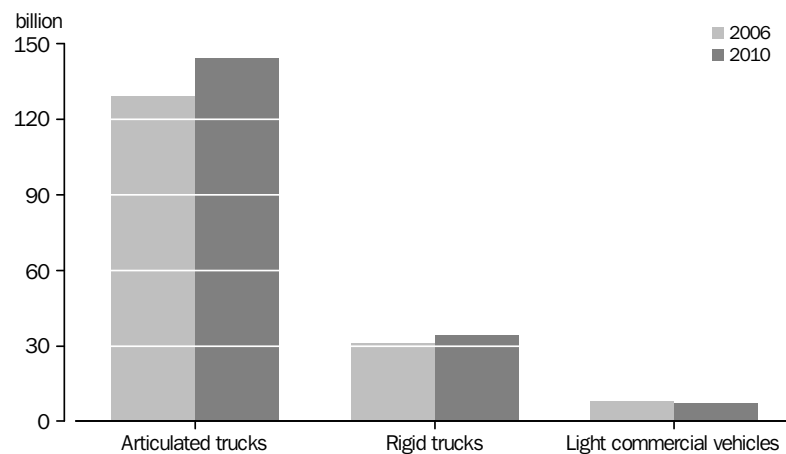
Freight carrying vehicles accounted for 25.9% of the total kilometres travelled in 2010. Of the 58,643 million kilometres travelled by freight carrying vehicles, light commercial vehicles accounted for 72.8% of the kilometres travelled, followed by rigid trucks (15.4%), and articulated trucks (11.8%).

TONNE-KILOMETRES

In 2010, total tonne-kilometres travelled by freight vehicles in Australia was 185,911 million. Of this, articulated trucks accounted for 77.6% followed by rigid trucks (18.5%) and light commercial vehicles (3.9%).

By comparison, in 2006, freight vehicles travelled a total of 167,935 million tonne-kilometres. Articulated trucks accounted for 76.8%, followed by rigid trucks (18.5%) and light commercial vehicles (4.4%).

TOTAL TONNES-KILOMETRES TRAVELLED, Type of vehicle—Years ended 31 October 2006 and 31 October 2010



SUMMARY OF FINDINGS *continued*

In 2010, articulated trucks travelled an average of 1.9 million tonne-kilometres. In comparison, rigid trucks and light commercial vehicles travelled an average of 92,600 and 5,600 tonne-kilometres, respectively.

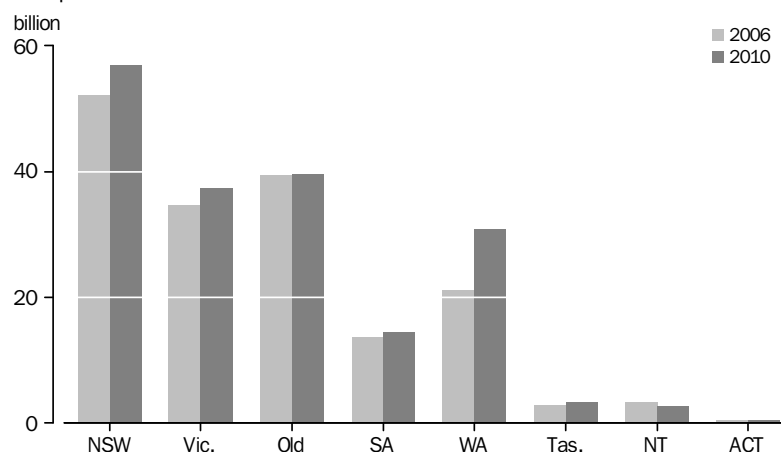
There were 144,237 million tonne-kilometres travelled by articulated trucks in 2010. Of those, articulated trucks with a Gross Combination Mass (GCM) of over 40 tonnes accounted for 95.1% of the total tonne-kilometres travelled.

State/territory of operation

In 2010, the most tonne-kilometres travelled by freight vehicles were in New South Wales (56,918 million), followed by Queensland (39,614 million).

Over the period 2006 to 2010, tonne-kilometres travelled by freight vehicles in Western Australia increased by 46.1% (9,749 million). This was the largest percentage increase for any state or territory.

TOTAL TONNE-KILOMETRES TRAVELLED BY FREIGHT VEHICLES, State of operation—Years ended 31 October 2006 and 31 October 2010



TONNE-KILOMETRES TRAVELLED BY FREIGHT VEHICLES, State/territory of operation—Years ended 31 October 2006 and 31 October 2010

.....

| | 2006 | 2010 | Change from 2006 to 2010 |
|--|-------|-------|--------------------------|
| | mill. | mill. | % |

TOTAL TONNE-KILOMETRES TRAVELLED

| | | | |
|------------------------------|--------|--------|-------|
| New South Wales | 52 259 | 56 918 | 8.9 |
| Victoria | 34 726 | 37 405 | 7.7 |
| Queensland | 39 440 | 39 614 | 0.4 |
| South Australia | 13 692 | 14 519 | 6.0 |
| Western Australia | 21 129 | 30 878 | 46.1 |
| Tasmania | 2 875 | 3 378 | 17.5 |
| Northern Territory | 3 300 | 2 710 | -17.9 |
| Australian Capital Territory | 515 | 489 | -5.0 |

Australia **167 935** **185 911** **10.7**

.....

SUMMARY OF FINDINGS *continued*

FUEL CONSUMPTION

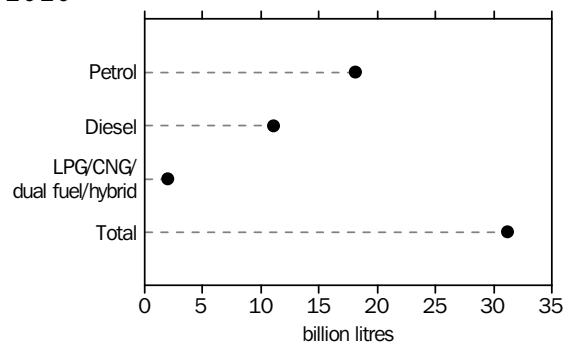
In 2010, registered motor vehicles in Australia consumed 31,186 million litres of fuel, compared with 28,898 million litres in 2006. Of the total fuel consumed by motor vehicles in 2010, 58.1% was petrol and 35.6% was diesel.

Passenger vehicles consumed 18,431 litres of fuel in 2010, of which 84.1% (15,497 million) was petrol.

Light commercial vehicles consumed a total of 5,546 million litres of fuel in 2010. Of this, diesel accounted for 48.1% (2,665 million) followed by petrol with 43.5% (2,410 million).

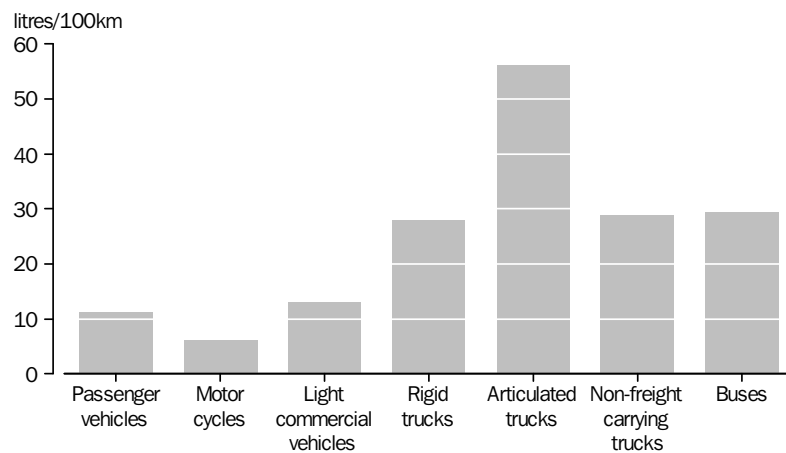
A total of 6,403 million litres of fuel was consumed by rigid and articulated trucks. Diesel was the main fuel type (98.6%).

TOTAL FUEL CONSUMPTION, Type of fuel—Year ended 31 October 2010



The average rate of fuel consumption for all motor vehicles in 2010 was 13.8 litres per 100 kilometres. Of all vehicle types, articulated trucks had the highest average fuel consumption with 56.2 litres per 100 kilometres.

AVERAGE FUEL CONSUMPTION, Type of vehicle—Year ended 31 October 2010



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SUMMARY OF MOTOR VEHICLE USE, Type of vehicle

| | 2004 | 2005 | 2006 | 2007 | 2010 |
|-----------------------------------------------|----------------|----------------|----------------|----------------|----------------|
| TOTAL KILOMETRES TRAVELLED (<i>million</i>) | | | | | |
| Passenger vehicles | 147 728 | 155 068 | 156 184 | 157 928 | 163 360 |
| Motor cycles | 1 478 | 1 429 | 1 641 | 1 905 | 2 394 |
| Light commercial vehicles | 34 007 | 33 764 | 35 210 | 37 385 | 42 715 |
| Rigid trucks | 7 639 | 7 671 | 8 040 | 8 644 | 9 011 |
| Articulated trucks | 6 013 | 6 308 | 6 151 | 6 929 | 6 917 |
| Non-freight carrying trucks | 221 | 286 | 261 | 283 | 210 |
| Buses | 1 968 | 1 856 | 1 917 | 2 097 | 2 024 |
| Total | 199 055 | 206 383 | 209 405 | 215 171 | 226 632 |

| | NUMBER OF VEHICLES (a) (<i>no.</i>) | | | | |
|-----------------------------|---------------------------------------|-------------------|-------------------|-------------------|-------------------|
| Passenger vehicles | 10 654 328 | 11 010 506 | 11 273 219 | 11 519 214 | 12 341 262 |
| Motor cycles | 392 648 | 421 549 | 458 169 | 508 626 | 653 186 |
| Light commercial vehicles | 1 940 180 | 1 996 269 | 2 081 738 | 2 183 449 | 2 441 929 |
| Rigid trucks | 358 704 | 366 875 | 386 626 | 392 837 | 433 258 |
| Articulated trucks | 66 197 | 68 509 | 69 696 | 74 343 | 81 376 |
| Non-freight carrying trucks | 17 616 | 20 304 | 19 971 | 20 024 | 21 538 |
| Buses | 61 728 | 62 350 | 63 177 | 66 330 | 72 509 |
| Total | 13 491 401 | 13 946 362 | 14 352 595 | 14 764 823 | 16 045 057 |

| | AVERAGE KILOMETRES TRAVELLED (b) (<i>'000</i>) | | | | |
|-----------------------------|--------------------------------------------------|-------------|-------------|-------------|-------------|
| Passenger vehicles | 13.9 | 14.1 | 13.9 | 13.7 | 13.2 |
| Motor cycles | 3.8 | 3.4 | 3.6 | 3.7 | 3.7 |
| Light commercial vehicles | 17.5 | 16.9 | 16.9 | 17.1 | 17.5 |
| Rigid trucks | 21.3 | 20.9 | 20.8 | 22.0 | 20.8 |
| Articulated trucks | 90.8 | 92.1 | 88.3 | 93.2 | 85.0 |
| Non-freight carrying trucks | 12.5 | 14.1 | 13.1 | 14.2 | 9.8 |
| Buses | 31.9 | 29.8 | 30.3 | 31.6 | 27.9 |
| Total | 14.8 | 14.8 | 14.6 | 14.6 | 14.1 |

| | TOTAL FUEL CONSUMPTION (<i>million litres</i>) | | | | |
|-----------------------------|--------------------------------------------------|---------------|---------------|---------------|---------------|
| Passenger vehicles | 16 937 | 18 144 | 17 831 | 18 094 | 18 431 |
| Motor cycles | 92 | 83 | 105 | 124 | 147 |
| Light commercial vehicles | 4 471 | 4 484 | 4 580 | 4 909 | 5 546 |
| Rigid trucks | 2 123 | 2 234 | 2 382 | 2 463 | 2 519 |
| Articulated trucks | 3 305 | 3 452 | 3 417 | 3 785 | 3 884 |
| Non-freight carrying trucks | 53 | 65 | 69 | 78 | 61 |
| Buses | 524 | 506 | 514 | 595 | 598 |
| Total | 27 505 | 28 967 | 28 898 | 30 047 | 31 186 |

| | AVERAGE RATE OF FUEL CONSUMPTION (c) (<i>litres per 100 kilometres</i>) | | | | |
|-----------------------------|---------------------------------------------------------------------------|-------------|-------------|-------------|-------------|
| Passenger vehicles | 11.5 | 11.7 | 11.4 | 11.5 | 11.3 |
| Motor cycles | 6.3 | 5.8 | 6.4 | 6.5 | 6.1 |
| Light commercial vehicles | 13.1 | 13.3 | 13.0 | 13.1 | 13.0 |
| Rigid trucks | 27.8 | 29.1 | 29.6 | 28.5 | 28.0 |
| Articulated trucks | 55.0 | 54.7 | 55.6 | 54.6 | 56.2 |
| Non-freight carrying trucks | 24.0 | 22.7 | 26.4 | 27.6 | 29.0 |
| Buses | 26.6 | 27.3 | 26.8 | 28.3 | 29.5 |
| Total | 13.8 | 14.0 | 13.8 | 14.0 | 13.8 |

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

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

SUMMARY OF FREIGHT VEHICLE USE, Type of vehicle

| | 2004 | 2005 | 2006 | 2007 | 2010 |
|---------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|
| TOTAL LADEN BUSINESS KILOMETRES TRAVELLED (million) | | | | | |
| Light commercial vehicles | 15 844 | 15 537 | 16 276 | 17 400 | 17 035 |
| Rigid trucks | 5 322 | 5 169 | 5 596 | 5 816 | 6 079 |
| Articulated trucks | 4 367 | 4 777 | 4 604 | 5 122 | 5 000 |
| Total freight vehicles | 25 533 | 25 483 | 26 477 | 28 338 | 28 114 |
| AVERAGE LADEN BUSINESS KILOMETRES TRAVELLED (a) ('000) | | | | | |
| Light commercial vehicles | 14.4 | 13.5 | 14.1 | 14.4 | 13.1 |
| Rigid trucks | 16.8 | 16.8 | 16.9 | 17.5 | 16.3 |
| Articulated trucks | 71.4 | 75.9 | 71.9 | 73.8 | 66.5 |
| Total freight vehicles | 17.2 | 16.8 | 17.1 | 17.6 | 16.1 |
| TOTAL TONNE-KILOMETRES TRAVELLED (million) | | | | | |
| Light commercial vehicles | 6 634 | 7 308 | 7 914 | 6 597 | 7 233 |
| Rigid trucks | 29 752 | 30 160 | 31 006 | 33 873 | 34 441 |
| Articulated trucks | 121 282 | 126 926 | 129 014 | 143 601 | 144 237 |
| Total freight vehicles | 157 668 | 164 394 | 167 935 | 184 072 | 185 911 |
| AVERAGE TONNE-KILOMETRES TRAVELLED (b) ('000) | | | | | |
| Light commercial vehicles | 6.0 | 6.4 | 6.8 | 5.5 | 5.6 |
| Rigid trucks | 93.7 | 98.0 | 93.7 | 101.9 | 92.6 |
| Articulated trucks | 1 983.3 | 2 015.9 | 2 014.9 | 2 068.7 | 1 919.2 |
| Total freight vehicles | 106.4 | 108.2 | 108.2 | 114.5 | 106.6 |
| TOTAL TONNES CARRIED (million) | | | | | |
| Light commercial vehicles | 120 | 136 | 151 | 166 | 161 |
| Rigid trucks | 807 | 938 | 881 | 1 035 | 951 |
| Articulated trucks | 769 | 682 | 812 | 946 | 980 |
| Total freight vehicles | 1 696 | 1 756 | 1 844 | 2 146 | 2 092 |
| AVERAGE LOAD CARRIED PER TRIP (c) (kilograms) | | | | | |
| Light commercial vehicles | 362 | 423 | 460 | 357 | 406 |
| Rigid trucks | 6 068 | 6 415 | 5 624 | 6 374 | 5 390 |
| Articulated trucks | 23 921 | 23 872 | 24 112 | 24 746 | 25 351 |
| Total freight vehicles | 3 421 | 3 543 | 3 555 | 3 229 | 3 416 |

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

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

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

SUMMARY OF MOTOR VEHICLE USE, State/territory of registration

| | 2004 | 2005 | 2006 | 2007 | 2010 |
|-----------------------------------------------|----------------|----------------|----------------|----------------|----------------|
| TOTAL KILOMETRES TRAVELLED (<i>million</i>) | | | | | |
| New South Wales | 58 875 | 63 717 | 61 400 | 62 732 | 66 581 |
| Victoria | 52 583 | 51 952 | 54 698 | 57 930 | 60 171 |
| Queensland | 41 643 | 44 526 | 45 431 | 46 071 | 48 517 |
| South Australia | 15 241 | 14 533 | 15 535 | 14 212 | 14 615 |
| Western Australia | 21 324 | 21 647 | 22 616 | 24 289 | 26 285 |
| Tasmania | 4 561 | 5 302 | 5 065 | 4 992 | 4 975 |
| Northern Territory | 1 594 | 1 603 | 1 647 | 1 785 | 1 949 |
| Australian Capital Territory | 3 234 | 3 104 | 3 014 | 3 160 | 3 539 |
| Australia | 199 055 | 206 383 | 209 405 | 215 171 | 226 632 |

| | NUMBER OF VEHICLES (a) (<i>no.</i>) | | | | |
|------------------------------|---------------------------------------|-------------------|-------------------|-------------------|-------------------|
| New South Wales | 4 059 983 | 4 193 362 | 4 261 321 | 4 351 910 | 4 673 192 |
| Victoria | 3 538 822 | 3 650 826 | 3 740 570 | 3 825 633 | 4 108 442 |
| Queensland | 2 665 200 | 2 764 824 | 2 903 610 | 3 036 175 | 3 362 083 |
| South Australia | 1 082 691 | 1 107 910 | 1 139 681 | 1 147 367 | 1 233 241 |
| Western Australia | 1 471 497 | 1 542 199 | 1 600 823 | 1 678 470 | 1 871 679 |
| Tasmania | 350 976 | 360 238 | 373 797 | 380 105 | 409 949 |
| Northern Territory | 106 651 | 109 968 | 111 967 | 118 132 | 133 700 |
| Australian Capital Territory | 215 581 | 217 036 | 220 827 | 227 031 | 252 771 |
| Australia | 13 491 401 | 13 946 362 | 14 352 595 | 14 764 823 | 16 045 057 |

| | AVERAGE KILOMETRES TRAVELLED (b) ('000) | | | | |
|------------------------------|-----------------------------------------|-------------|-------------|-------------|-------------|
| New South Wales | 14.5 | 15.2 | 14.4 | 14.4 | 14.2 |
| Victoria | 14.9 | 14.2 | 14.6 | 15.1 | 14.6 |
| Queensland | 15.6 | 16.1 | 15.6 | 15.2 | 14.4 |
| South Australia | 14.1 | 13.1 | 13.6 | 12.4 | 11.9 |
| Western Australia | 14.5 | 14.0 | 14.1 | 14.5 | 14.0 |
| Tasmania | 13.0 | 14.7 | 13.5 | 13.1 | 12.1 |
| Northern Territory | 14.9 | 14.6 | 14.7 | 15.1 | 14.6 |
| Australian Capital Territory | 15.0 | 14.3 | 13.6 | 13.9 | 14.0 |
| Australia | 14.8 | 14.8 | 14.6 | 14.6 | 14.1 |

(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. Includes registered vehicles that did not travel during the reference period.

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 (<i>million</i>) | | | | | | | | |
| New South Wales | 49 696 | 681 | 11 602 | 2 546 | 1 397 | 57 | 603 | 66 581 |
| Victoria | 44 968 | *406 | 9 923 | 2 327 | 2 106 | *36 | 403 | 60 171 |
| Queensland | 32 024 | 787 | 11 437 | 2 011 | 1 748 | 64 | 445 | 48 517 |
| South Australia | 10 517 | 132 | 2 697 | 548 | 574 | 11 | 137 | 14 615 |
| Western Australia | 18 567 | 269 | 5 010 | 1 256 | 878 | 33 | 271 | 26 285 |
| Tasmania | 3 427 | *39 | 1 126 | 193 | 132 | *6 | 52 | 4 975 |
| Northern Territory | 1 186 | *30 | 527 | 69 | 60 | np | np | 1 949 |
| Australian Capital Territory | 2 974 | 49 | 392 | 60 | 22 | np | np | 3 539 |
| Australia | 163 360 | 2 394 | 42 715 | 9 011 | 6 917 | 210 | 2 024 | 226 632 |

| | NUMBER OF VEHICLES (a) (<i>no.</i>) | | | | | | | |
|------------------------------|---------------------------------------|----------------|------------------|----------------|---------------|---------------|---------------|-------------------|
| New South Wales | 3 695 202 | 173 305 | 646 196 | 119 279 | 16 493 | 2 927 | 19 789 | 4 673 192 |
| Victoria | 3 260 945 | 157 326 | 534 895 | 109 491 | 24 517 | 6 060 | 15 207 | 4 108 442 |
| Queensland | 2 439 291 | 151 212 | 634 301 | 96 805 | 18 320 | 5 256 | 16 898 | 3 362 083 |
| South Australia | 967 314 | 45 891 | 176 181 | 30 395 | 7 094 | 1 753 | 4 612 | 1 233 241 |
| Western Australia | 1 386 404 | 93 472 | 306 262 | 58 833 | 12 147 | 4 471 | 10 089 | 1 871 679 |
| Tasmania | 295 514 | 14 116 | 85 037 | 11 005 | 1 610 | 709 | 1 958 | 409 949 |
| Northern Territory | 83 414 | 5 922 | 35 064 | 4 990 | 1 012 | np | np | 133 700 |
| Australian Capital Territory | 213 177 | 11 942 | 23 993 | 2 458 | 182 | np | np | 252 771 |
| Australia | 12 341 262 | 653 186 | 2 441 929 | 433 258 | 81 376 | 21 538 | 72 509 | 16 045 057 |

| | AVERAGE KILOMETRES TRAVELLED (b) ('000) | | | | | | | |
|------------------------------|-----------------------------------------|------------|-------------|-------------|-------------|------------|-------------|-------------|
| New South Wales | 13.4 | 3.9 | 18.0 | 21.3 | 84.7 | 19.3 | 30.5 | 14.2 |
| Victoria | 13.8 | *2.6 | 18.6 | 21.3 | 85.9 | 5.9 | 26.5 | 14.6 |
| Queensland | 13.1 | 5.2 | 18.0 | 20.8 | 95.4 | 12.2 | 26.4 | 14.4 |
| South Australia | 10.9 | 2.9 | 15.3 | 18.0 | 80.9 | 6.4 | 29.6 | 11.9 |
| Western Australia | 13.4 | 2.9 | 16.4 | 21.4 | 72.3 | 7.3 | 26.9 | 14.0 |
| Tasmania | 11.6 | *2.8 | 13.2 | 17.6 | 81.9 | *8.0 | 26.3 | 12.1 |
| Northern Territory | 14.2 | *5.0 | 15.0 | 13.8 | 59.7 | 9.7 | 24.4 | 14.6 |
| Australian Capital Territory | 14.0 | 4.1 | 16.3 | 24.5 | 119.7 | 22.5 | np | 14.0 |
| Australia | 13.2 | 3.7 | 17.5 | 20.8 | 85.0 | 9.8 | 27.9 | 14.1 |

* 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. Includes registered vehicles that did not travel during the reference period.

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 (million litres) | | | | | | | | |
| Petrol | 15 497 | 146 | 2 410 | 23 | **— | *1 | 31 | 18 108 |
| Diesel | 1 550 | **1 | 2 665 | 2 479 | 3 837 | 58 | 496 | 11 087 |
| LPG/CNG/dual fuel/hybrid | 1 384 | — | 471 | *16 | *47 | **2 | 71 | 1 992 |
| Total | 18 431 | 147 | 5 546 | 2 519 | 3 884 | 61 | 598 | 31 186 |

| | AVERAGE RATE OF FUEL CONSUMPTION (a) (litres per 100 kilometres) | | | | | | | |
|--------------------------|------------------------------------------------------------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Petrol | 11.1 | 6.1 | 13.6 | 21.3 | **47.6 | 16.2 | 15.4 | 11.3 |
| Diesel | 11.4 | **14.5 | 12.2 | 28.0 | 56.0 | 29.5 | 30.0 | 20.9 |
| LPG/CNG/dual fuel/hybrid | 13.6 | — | 15.1 | *28.8 | 79.2 | 24.2 | 41.2 | 14.7 |
| Total | 11.3 | 6.1 | 13.0 | 28.0 | 56.2 | 29.0 | 29.5 | 13.8 |

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

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

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 (<i>million</i>) | | | | | | |
| Passenger vehicles | 95 619 | 30 787 | 31 400 | 157 806 | 5 555 | 163 360 |
| Motor cycles | 1 090 | 428 | 540 | 2 058 | *335 | 2 394 |
| Light commercial vehicles | 19 726 | 8 324 | 12 501 | 40 572 | 2 143 | 42 715 |
| Rigid trucks | 4 989 | 1 342 | 2 334 | 8 665 | 346 | 9 011 |
| Articulated trucks | 1 365 | 558 | 3 097 | 5 020 | 1 896 | 6 917 |
| Non-freight carrying trucks | 109 | 37 | 58 | 204 | **7 | 210 |
| Buses | 1 026 | 379 | 553 | 1 958 | 67 | 2 024 |
| Total | 123 924 | 41 854 | 50 483 | 216 283 | 10 349 | 226 632 |

AVERAGE KILOMETRES TRAVELLED (a) ('000)

| | | | | | | |
|-----------------------------|-------------|------------|-------------|-------------|------------|-------------|
| Passenger vehicles | 10.8 | 7.7 | 9.0 | 13.5 | 6.1 | 13.9 |
| Motor cycles | 3.9 | 2.3 | 3.0 | 4.1 | 7.9 | 4.7 |
| Light commercial vehicles | 15.0 | 9.4 | 13.0 | 17.7 | 9.7 | 18.4 |
| Rigid trucks | 22.8 | 11.9 | 13.8 | 22.0 | 14.6 | 22.6 |
| Articulated trucks | 31.4 | 19.3 | 59.1 | 68.4 | 86.8 | 90.8 |
| Non-freight carrying trucks | 15.0 | 8.1 | 6.6 | 10.9 | *10.1 | 11.0 |
| Buses | 26.7 | 16.2 | 19.6 | 28.4 | 16.2 | 29.1 |
| Total | 11.5 | 8.0 | 10.3 | 14.4 | 8.4 | 14.9 |

* 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) 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 (<i>million</i>) | | | | | | |
| New South Wales | 36 490 | 14 579 | 12 962 | 64 039 | *2 542 | 66 581 |
| Victoria | 37 690 | 7 191 | 12 370 | 57 251 | 2 920 | 60 171 |
| Queensland | 18 674 | 16 657 | 10 669 | 46 000 | 2 517 | 48 517 |
| South Australia | 8 904 | — | 4 974 | 13 878 | 737 | 14 615 |
| Western Australia | 16 643 | 1 980 | 7 132 | 25 755 | **530 | 26 285 |
| Tasmania | 1 829 | 1 448 | 1 613 | 4 891 | *85 | 4 975 |
| Northern Territory | 1 050 | — | 762 | 1 824 | 124 | 1 949 |
| Australian Capital Territory | 2 644 | — | — | 2 644 | 895 | 3 539 |
| Australia | 123 924 | 41 854 | 50 483 | 216 283 | 10 349 | 226 632 |

AVERAGE KILOMETRES TRAVELLED (a) ('000)

| | | | | | | |
|------------------------------|-------------|------------|-------------|-------------|------------|-------------|
| New South Wales | 11.8 | 8.5 | 9.6 | 14.1 | *6.5 | 14.7 |
| Victoria | 13.2 | 6.2 | 10.2 | 15.3 | 9.3 | 15.8 |
| Queensland | 9.8 | 9.4 | 10.8 | 14.6 | 8.4 | 15.2 |
| South Australia | 9.4 | — | 9.8 | 12.0 | 11.2 | 12.6 |
| Western Australia | 11.9 | 4.8 | 12.4 | 14.9 | 25.9 | 15.2 |
| Tasmania | 8.7 | 8.1 | 9.0 | 13.0 | 10.4 | 13.1 |
| Northern Territory | 11.3 | — | 12.0 | 14.5 | 16.0 | 15.1 |
| Australian Capital Territory | 11.3 | — | — | 11.3 | 7.4 | 14.7 |
| Australia | 11.5 | 8.0 | 10.3 | 14.4 | 8.4 | 14.9 |

* 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) 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 (<i>million</i>) | | | | | | |
| Passenger vehicles | — | — | 37 047 | 43 732 | 82 581 | 163 360 |
| Motor cycles | — | — | *186 | 644 | 1 564 | 2 394 |
| Light commercial vehicles | 17 035 | 6 916 | 23 951 | 9 023 | 9 741 | 42 715 |
| Rigid trucks | 6 079 | 2 582 | 8 661 | 195 | 155 | 9 011 |
| Articulated trucks | 5 000 | 1 905 | 6 905 | 10 | *2 | 6 917 |
| Non-freight carrying trucks | — | — | 205 | **6 | **— | 210 |
| Buses | — | — | 1 899 | 22 | 104 | 2 024 |
| Total | 28 114 | 11 403 | 78 853 | 53 631 | 94 147 | 226 632 |
| AVERAGE KILOMETRES TRAVELLED (b) ('000) | | | | | | |
| Passenger vehicles | — | — | 9.9 | 6.8 | 7.8 | 13.9 |
| Motor cycles | — | — | 3.2 | 3.2 | 3.6 | 4.7 |
| Light commercial vehicles | 13.1 | 7.9 | 16.9 | 8.5 | 7.5 | 18.4 |
| Rigid trucks | 16.3 | 9.0 | 23.1 | 5.4 | 4.2 | 22.6 |
| Articulated trucks | 66.5 | 28.7 | 91.0 | 3.8 | *2.2 | 90.8 |
| Non-freight carrying trucks | — | — | 10.7 | **7.5 | *0.5 | 11.0 |
| Buses | — | — | 30.4 | 5.1 | 10.4 | 29.1 |
| Total | 16.1 | 9.3 | 13.7 | 7.0 | 7.6 | 14.9 |

* 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 AND PRIVATE USE OF VEHICLES, State/territory of registration

| BUSINESS | | | | | | |
|-----------------------------------------------|---------------|---------------|---------------------------|---------------------------|--------------------------|----------------|
| | Laden | Unladen | All business use(a) | To and from work | Personal and other | Total |
| TOTAL KILOMETRES TRAVELLED (<i>million</i>) | | | | | | |
| New South Wales | 7 470 | 2 946 | 22 911 | 14 843 | 28 828 | 66 581 |
| Victoria | 6 467 | 2 760 | 20 063 | 13 647 | 26 460 | 60 171 |
| Queensland | 7 372 | 2 598 | 16 948 | 13 128 | 18 441 | 48 517 |
| South Australia | 2 095 | 720 | 4 971 | 3 559 | 6 085 | 14 615 |
| Western Australia | 3 593 | 1 862 | 10 388 | 6 048 | 9 849 | 26 285 |
| Tasmania | 587 | 278 | 1 719 | 1 045 | 2 211 | 4 975 |
| Northern Territory | 305 | 160 | 847 | 441 | 661 | 1 949 |
| Australian Capital Territory | 225 | 79 | 1 006 | 920 | 1 613 | 3 539 |
| Australia | 28 114 | 11 403 | 78 853 | 53 631 | 94 147 | 226 632 |
| AVERAGE KILOMETRES TRAVELLED (b) ('000) | | | | | | |
| New South Wales | 15.3 | 8.4 | 14.3 | 6.7 | 7.6 | 14.7 |
| Victoria | 16.7 | 10.2 | 13.3 | 7.1 | 8.4 | 15.8 |
| Queensland | 17.7 | 9.4 | 12.8 | 7.6 | 7.4 | 15.2 |
| South Australia | 15.6 | 7.5 | 12.6 | 6.3 | 6.4 | 12.6 |
| Western Australia | 15.5 | 10.9 | 15.6 | 6.9 | 7.2 | 15.2 |
| Tasmania | 12.4 | 8.1 | 14.5 | 6.5 | 7.2 | 13.1 |
| Northern Territory | 13.1 | 7.9 | 14.2 | 6.6 | 7.4 | 15.1 |
| Australian Capital Territory | 14.4 | 7.4 | 9.6 | 6.1 | 7.9 | 14.7 |
| Australia | 16.1 | 9.3 | 13.7 | 7.0 | 7.6 | 14.9 |

(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.

| | Passenger vehicles | Motor cycles | Light commercial vehicles | Rigid trucks | Articulated trucks | Non-freight carrying trucks | Buses | Total |
|--------------------------------------------------------|-----------------------|-----------------|---------------------------------|-----------------|-----------------------|-----------------------------------|--------------|---------------|
| TOTAL BUSINESS KILOMETRES TRAVELLED (<i>million</i>) | | | | | | | | |
| New South Wales | 11 787 | *75 | 6 600 | 2 424 | 1 393 | 52 | 581 | 22 911 |
| Victoria | 10 408 | **29 | 4 870 | 2 253 | 2 104 | *36 | 363 | 20 063 |
| Queensland | 6 472 | **27 | 6 284 | 1 941 | 1 745 | 64 | 414 | 16 948 |
| South Australia | 2 004 | *11 | 1 715 | 527 | 573 | 11 | 129 | 4 971 |
| Western Australia | 4 619 | **30 | 3 374 | 1 205 | 877 | 32 | 252 | 10 388 |
| Tasmania | 792 | **6 | 549 | 184 | 131 | *6 | 50 | 1 719 |
| Northern Territory | 306 | **4 | 336 | 68 | 60 | np | np | 847 |
| Australian Capital Territory | 658 | **4 | 223 | 58 | 22 | np | np | 1 006 |
| Australia | 37 047 | *186 | 23 951 | 8 661 | 6 905 | 205 | 1 899 | 78 853 |

| | AVERAGE BUSINESS KILOMETRES TRAVELLED (a) ('000) | | | | | | | |
|------------------------------|--------------------------------------------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|
| New South Wales | 11.4 | *3.3 | 16.7 | 22.5 | 89.4 | 17.6 | 32.2 | 14.3 |
| Victoria | 9.7 | **2.4 | 16.6 | 24.1 | 92.6 | 6.6 | 30.4 | 13.3 |
| Queensland | 7.7 | **4.2 | 17.9 | 22.3 | 99.2 | 14.3 | 28.7 | 12.8 |
| South Australia | 8.2 | *2.5 | 15.6 | 20.4 | 87.9 | 8.1 | 31.8 | 12.6 |
| Western Australia | 11.7 | **3.2 | 17.4 | 26.4 | 80.4 | 8.0 | 29.4 | 15.6 |
| Tasmania | 11.9 | 11.4 | 14.2 | 20.6 | 89.0 | *9.8 | 28.2 | 14.5 |
| Northern Territory | 10.2 | **5.7 | 16.3 | 15.1 | 67.1 | *10.7 | 25.4 | 14.2 |
| Australian Capital Territory | 7.8 | **2.8 | 15.2 | 25.0 | 123.1 | 24.4 | np | 9.6 |
| Australia | 9.9 | 3.2 | 16.9 | 23.1 | 91.0 | 10.7 | 30.4 | 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

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.

| | <i>Light commercial vehicles</i> | <i>Rigid trucks</i> | <i>Articulated trucks</i> | <i>Total</i> |
|------------------------------------------------------------|------------------------------------------|-------------------------|-------------------------------|---------------|
| TOTAL LADEN BUSINESS KILOMETRES TRAVELLED (million) | | | | |
| New South Wales | 4 777 | 1 663 | 1 030 | 7 470 |
| Victoria | 3 355 | 1 554 | 1 558 | 6 467 |
| Queensland | 4 685 | 1 413 | 1 274 | 7 372 |
| South Australia | 1 275 | 389 | 431 | 2 095 |
| Western Australia | 2 182 | 848 | 564 | 3 593 |
| Tasmania | 374 | 125 | 88 | 587 |
| Northern Territory | 222 | 46 | 37 | 305 |
| Australian Capital Territory | 166 | 41 | 17 | 225 |
| Australia | 17 035 | 6 079 | 5 000 | 28 114 |

| | AVERAGE LADEN BUSINESS KILOMETRES TRAVELLED (a) ('000) | | | |
|------------------------------|--------------------------------------------------------------------|-------------|-------------|-------------|
| New South Wales | 13.0 | 15.7 | 66.7 | 15.3 |
| Victoria | 12.4 | 16.7 | 69.4 | 16.7 |
| Queensland | 15.0 | 16.3 | 72.6 | 17.7 |
| South Australia | 12.5 | 15.0 | 66.9 | 15.6 |
| Western Australia | 12.4 | 18.9 | 52.3 | 15.5 |
| Tasmania | 10.1 | 14.1 | 60.0 | 12.4 |
| Northern Territory | 12.4 | 10.3 | 43.9 | 13.1 |
| Australian Capital Territory | 12.7 | 17.9 | 96.8 | 14.4 |
| Australia | 13.1 | 16.3 | 66.5 | 16.1 |

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

| | <i>Light commercial vehicles</i> | <i>Rigid trucks</i> | <i>Articulated trucks</i> | <i>Total</i> |
|-----------------------------------------------------|------------------------------------------|-------------------------|-------------------------------|----------------|
| | | | | |
| TOTAL TONNE-KILOMETRES TRAVELLED (<i>million</i>) | | | | |
| New South Wales | 2 259 | 10 301 | 26 169 | 38 729 |
| Victoria | 1 574 | 7 864 | 40 286 | 49 724 |
| Queensland | 1 656 | 7 878 | 35 562 | 45 096 |
| South Australia | 549 | 2 011 | 13 644 | 16 204 |
| Western Australia | 881 | 5 106 | 24 092 | 30 079 |
| Tasmania | 148 | 884 | 2 322 | 3 354 |
| Northern Territory | 97 | 162 | 1 764 | 2 024 |
| Australian Capital Territory | 69 | 234 | 398 | 701 |
| Australia | 7 233 | 34 441 | 144 237 | 185 911 |
| | | | | |
| AVERAGE TONNE-KILOMETRES TRAVELLED (a) ('000) | | | | |
| New South Wales | 6.1 | 97.1 | 1 695.7 | 79.1 |
| Victoria | 5.8 | 84.6 | 1 794.8 | 128.6 |
| Queensland | 5.3 | 91.1 | 2 025.0 | 108.4 |
| South Australia | 5.4 | 77.7 | 2 116.6 | 120.3 |
| Western Australia | 5.0 | 113.9 | 2 236.0 | 130.0 |
| Tasmania | 4.0 | 100.0 | 1 576.6 | 71.0 |
| Northern Territory | 5.4 | 36.3 | 2 094.9 | 87.2 |
| Australian Capital Territory | 5.3 | 101.4 | 2 247.2 | 44.9 |
| Australia | 5.6 | 92.6 | 1 919.2 | 106.6 |

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

| | <i>Light commercial vehicles</i> | <i>Rigid trucks</i> | <i>Articulated trucks</i> | <i>Total</i> |
|-----------------------------------------------------|------------------------------------------|-------------------------|-------------------------------|----------------|
| | | | | |
| TOTAL TONNE-KILOMETRES TRAVELLED (<i>million</i>) | | | | |
| New South Wales | 2 265 | 10 743 | 43 909 | 56 918 |
| Victoria | 1 581 | 7 721 | 28 103 | 37 405 |
| Queensland | 1 636 | 7 392 | 30 586 | 39 614 |
| South Australia | 537 | 2 104 | 11 878 | 14 519 |
| Western Australia | 886 | 5 146 | 24 846 | 30 878 |
| Tasmania | 147 | 943 | 2 289 | 3 378 |
| Northern Territory | 100 | 177 | 2 433 | 2 710 |
| Australian Capital Territory | 81 | 215 | *193 | 489 |
| Australia | 7 233 | 34 441 | 144 237 | 185 911 |

| | | | | |
|-----------------------------------------------|------------|-------------|----------------|--------------|
| AVERAGE TONNE-KILOMETRES TRAVELLED (a) ('000) | | | | |
| New South Wales | 5.3 | 91.5 | 1 548.7 | 98.7 |
| Victoria | 5.4 | 81.9 | 1 019.4 | 89.7 |
| Queensland | 5.2 | 82.0 | 1 263.4 | 91.7 |
| South Australia | 5.0 | 80.4 | 1 066.9 | 101.0 |
| Western Australia | 5.0 | 115.2 | 2 087.4 | 132.9 |
| Tasmania | 3.8 | 100.1 | 1 469.1 | 67.7 |
| Northern Territory | 4.3 | 35.3 | 1 436.9 | 90.0 |
| Australian Capital Territory | *3.0 | 73.7 | *156.3 | *15.8 |
| Australia | 5.6 | 92.6 | 1 919.2 | 106.6 |

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

(a) 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 (million) | | | | |
| 2 axles | 2 731 | 7 563 | **846 | 11 140 |
| 3 axles | **1 | *150 | 20 015 | 20 166 |
| 4 or more axles | — | — | 3 135 | 3 135 |
| Total | 2 732 | 7 713 | 23 996 | 34 441 |

| | | | | |
|-----------------|--------------------------------------------------|-------------|--------------|-------------|
| | AVERAGE TONNE-KILOMETRES TRAVELLED (b) (‘000) | | | |
| 2 axles | 17.3 | 55.8 | **232.1 | 37.5 |
| 3 axles | **17.4 | *36.4 | 323.9 | 305.8 |
| 4 or more axles | — | — | 338.2 | 338.2 |
| Total | 17.3 | 55.3 | 321.2 | 92.6 |

- * 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
- (b) 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 (<i>million</i>) | | | | |
| Single axle trailer | *79 | **9 | — | *89 |
| Tandem axle trailer | *291 | 3 041 | *1 099 | 4 431 |
| Triaxle trailer | **20 | 3 573 | 36 126 | 39 719 |
| B-Double | — | **9 | 64 675 | 64 684 |
| Road train | — | — | 30 216 | 30 216 |
| Other | — | **6 | 5 093 | 5 098 |
| Total | *391 | 6 638 | 137 208 | 144 237 |

| | | | | |
|---------------------|-----------------------------------------------|--------------|----------------|----------------|
| | AVERAGE TONNE-KILOMETRES TRAVELLED (b) ('000) | | | |
| Single axle trailer | *91.7 | **125.9 | — | *94.3 |
| Tandem axle trailer | *274.0 | 438.7 | 690.8 | 462.2 |
| Triaxle trailer | **282.8 | 757.0 | 1 020.0 | 987.8 |
| B-Double | — | **612.3 | 4 186.0 | 4 182.7 |
| Road train | — | — | 4 177.2 | 4 177.2 |
| Other | — | **146.6 | 3 033.4 | 2 967.6 |
| Total | *195.4 | 563.5 | 2 235.7 | 1 919.2 |

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

| | <i>Light commercial vehicles</i> | <i>Rigid trucks</i> | <i>Articulated trucks</i> | <i>Total</i> |
|--------------------------------------------------------|------------------------------------------|-------------------------|-------------------------------|--------------|
| | | | | |
| TOTAL LOAD CARRIED (<i>million tonnes</i>) | | | | |
| New South Wales | 37 | 280 | 220 | 537 |
| Victoria | 37 | 227 | 240 | 504 |
| Queensland | 38 | 214 | 183 | 434 |
| South Australia | 13 | 73 | 72 | 159 |
| Western Australia | *29 | 119 | 226 | 373 |
| Tasmania | 4 | 21 | 22 | 47 |
| Northern Territory | 2 | 8 | 15 | 25 |
| Australian Capital Territory | 2 | 9 | 2 | 12 |
| Australia | 161 | 951 | 980 | 2 092 |
| | | | | |
| AVERAGE LOAD CARRIED PER TRIP (a) (<i>kilograms</i>) | | | | |
| New South Wales | 445 | 5 278 | 23 470 | 3 683 |
| Victoria | 424 | 5 067 | 22 098 | 3 530 |
| Queensland | 355 | 5 612 | 24 501 | 2 864 |
| South Australia | 420 | 6 106 | 25 288 | 3 392 |
| Western Australia | 431 | 5 601 | 33 143 | 3 954 |
| Tasmania | 312 | 5 965 | 24 581 | 2 944 |
| Northern Territory | 411 | 3 448 | 48 522 | 3 031 |
| Australian Capital Territory | 334 | 6 160 | 22 006 | 1 839 |
| Australia | 406 | 5 390 | 25 351 | 3 416 |

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

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

FREIGHT VEHICLE USE, Commodity—Total tonnes carried (million)

| | <i>Light commercial vehicles</i> | <i>Rigid trucks</i> | <i>Articulated trucks</i> | <i>Total</i> |
|---------------------------------------------------------|------------------------------------------|-------------------------|-------------------------------|--------------|
| Food and live animals | *6 | 89 | 199 | 294 |
| Beverages and tobacco | *1 | *8 | 19 | 28 |
| Crude materials, inedible, except fuels | *15 | 387 | 227 | 629 |
| Mineral fuels, lubricants and related materials | *3 | **42 | 123 | 167 |
| Animal and vegetable oils, fats and waxes | **— | *2 | *5 | 7 |
| Chemicals and related products, not elsewhere specified | *3 | 12 | 22 | 37 |
| Manufactured goods | 10 | 117 | 143 | 270 |
| Machinery, transport equipment | *17 | 55 | 59 | 131 |
| Miscellaneous manufactured articles | *3 | 16 | *15 | 33 |
| Tools of trade | 83 | 52 | *10 | 146 |
| Other commodities, not elsewhere specified | 10 | 145 | 105 | 260 |
| Unspecified(a) | 10 | 29 | *51 | 90 |
| Total | 161 | 951 | 980 | 2 092 |

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

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 (<i>million</i>) | | | | | | | |
| Buses with fewer than 20 seats | *34 | *64 | *117 | *26 | 309 | *23 | 573 |
| Buses with 20 or more seats | 751 | 335 | 124 | *65 | 74 | **1 | 1 350 |
| Total | 785 | 399 | 241 | 91 | 383 | *24 | 1 923 |

| | AVERAGE KILOMETRES TRAVELLED (c) ('000) | | | | | | |
|--------------------------------|-----------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Buses with fewer than 20 seats | 18.1 | *20.4 | 37.5 | *17.3 | 16.3 | 21.8 | 22.0 |
| Buses with 20 or more seats | 52.8 | 18.4 | 13.3 | *34.2 | 13.2 | **5.0 | 37.1 |
| Total | 48.8 | 18.7 | 19.4 | 26.8 | 15.6 | 19.9 | 30.8 |

* 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

(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.

| | Route service | Dedicated school bus service | Charter service | Other(b) | Not specified(c) | Total |
|-----------------------------------------------|------------------|------------------------------------|--------------------|------------|---------------------|--------------|
| TOTAL KILOMETRES TRAVELLED (<i>million</i>) | | | | | | |
| New South Wales | 267 | 180 | *27 | 115 | — | 589 |
| Victoria | 129 | 62 | *70 | 100 | **4 | 365 |
| Queensland | 165 | 83 | *81 | 86 | **4 | 419 |
| South Australia | 76 | 20 | *8 | 26 | — | 130 |
| Western Australia | 93 | 39 | *33 | 86 | **5 | 257 |
| Tasmania | 21 | *5 | *8 | *17 | — | 51 |
| Northern Territory | np | np | np | np | np | np |
| Australian Capital Territory | np | np | np | np | np | np |
| Australia | 785 | 399 | 241 | 474 | *24 | 1 923 |

| | AVERAGE KILOMETRES TRAVELLED (d) ('000) | | | | | |
|------------------------------|-----------------------------------------|-------------|-------------|-------------|-------------|-------------|
| New South Wales | 43.1 | 20.5 | *9.5 | 15.7 | — | 32.7 |
| Victoria | 52.4 | 19.0 | *23.8 | 17.9 | **25.7 | 30.6 |
| Queensland | 57.3 | 16.1 | *22.3 | 15.3 | *10.4 | 29.0 |
| South Australia | 51.1 | 15.0 | 12.8 | 17.6 | — | 32.0 |
| Western Australia | 47.3 | 22.4 | 23.6 | 20.5 | *37.9 | 30.0 |
| Tasmania | 44.4 | *13.2 | *20.9 | *21.0 | — | 28.6 |
| Northern Territory | 41.9 | 14.4 | 29.7 | 24.0 | 21.5 | 26.3 |
| Australian Capital Territory | np | np | np | np | np | np |
| Australia | 48.8 | 18.7 | 19.4 | 17.6 | 19.9 | 30.8 |

* 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)

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 2010 Survey of Motor Vehicle Use (SMVU). The data were collected in four quarterly sample surveys conducted by the Australian Bureau of Statistics (ABS) over the period 1 November 2009 to 31 October 2010.

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 31 October 2010. 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 was identified on 31 March 2009 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 15.7 million vehicles identified at this time, an increase of 2.5% on the number registered at the same time the previous year. The population information identified is referred to as the survey frame.

METHODOLOGY

4 For the 2010 SMVU, a sample of 16,000 vehicles was selected to report on vehicle use over a three month period within the reference year 1 November 2009 to 31 October 2010. These consisted of, 23.0% passenger vehicles or motor cycles, 63.2% freight vehicles, 10.8% buses and 3.0% non-freight carrying vehicles. The sample size was chosen to give a suitable level of reliability of the estimates of total distance travelled and tonne-kilometres for each state/territory of registration by type of vehicle category.

5 The survey methodology is described as pre-advice, where owners of vehicles selected in the survey received early advice about their inclusion to encourage record keeping and minimise reliance on recall. These owners were asked to complete two mail questionnaires tailored to their vehicle type. The first, at the beginning of each quarterly 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 quarter seeking details about the use of the vehicle over the quarter 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 in the on-line version of the Survey at 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 providers could not be made, missing items on incomplete questionnaires were filled by imputing average data from like vehicles for which data were obtained.

7 Where the selected vehicle owner had not owned the vehicle for the whole quarterly survey period, the details provided for the period of ownership were adjusted to give a three-month equivalent. Where the vehicle was deregistered during the quarterly survey period, only the use 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. For the 2010 SMVU, the population frame was created on 31 March 2009. More information about these adjustments is provided in paragraph 24 of the Technical Note.

9 Estimates from information reported in each quarterly collection period were produced and these were then aggregated into annual estimates relating to the use of vehicles during the period 1 November 2009 to 31 October 2010. The size of the sample is insufficient to produce reliable quarterly results.

EXPLANATORY NOTES *continued*

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 November 2009 to 31 October 2010, not to the number of vehicles registered at a specific date, as is the case for the Motor Vehicle Census.
- the characteristics of the type of vehicle identified from the survey information may differ from those recorded by the motor 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 travelled zero kilometres during the reference period (also known as nil use vehicles). See paragraph 27 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 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 methodology was designed to produce reliable level estimates of key data items at the state by vehicle type level. The survey was not designed to produce reliable estimates of annual movements. Changes in data over time may be subject to high RSEs and hence the changes 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:

Information Paper: Changes to the Survey of Motor Vehicle Use (cat. no. 9208.0.55.006)

Survey of Motor Vehicle Use: Data Cubes, Australia (cat. no. 9210.0.55.001)

Motor Vehicle Census, Australia (cat. no. 9309.0)

Sales of New Motor Vehicles, Australia (cat. no. 9314.0)

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.

TECHNICAL NOTE DATA QUALITY INDICATORS

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 methodology 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 data 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 2010 estimates contained in Table 4 of this publication are shown in the following table.

TECHNICAL NOTE DATA QUALITY INDICATORS *continued*

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 | 6.1 | 14.3 | 6.9 | 5.6 | 3.6 | 22.9 | 8.4 | 4.7 |
| Victoria | 5.3 | 25.6 | 5.9 | 7.6 | 4.1 | 25.3 | 8.8 | 4.1 |
| Queensland | 5.9 | 17.1 | 7.0 | 5.5 | 4.0 | 19.0 | 8.7 | 4.3 |
| South Australia | 5.4 | 14.6 | 6.3 | 6.3 | 5.1 | 20.7 | 6.6 | 4.1 |
| Western Australia | 5.5 | 17.9 | 5.4 | 12.0 | 4.1 | 21.5 | 6.9 | 4.0 |
| Tasmania | 4.7 | 25.7 | 5.4 | 5.9 | 8.0 | 26.0 | 16.1 | 3.4 |
| Northern Territory | 8.1 | 28.0 | 6.5 | 9.0 | 8.8 | np | np | 5.3 |
| Australian Capital Territory | 5.4 | 23.4 | 6.8 | 5.3 | 8.5 | np | np | 4.6 |
| Australia | 2.7 | 8.4 | 3.1 | 3.3 | 1.8 | 10.2 | 3.8 | 2.1 |
| NUMBER OF VEHICLES | | | | | | | | |
| New South Wales | 1.6 | 4.6 | 2.1 | 1.7 | 1.7 | 14.9 | 4.5 | 1.3 |
| Victoria | 1.7 | 4.9 | 1.8 | 4.6 | 1.7 | 14.1 | 4.6 | 1.4 |
| Queensland | 1.7 | 5.3 | 2.0 | 1.9 | 2.0 | 11.2 | 3.5 | 1.3 |
| South Australia | 1.4 | 1.6 | 4.2 | 4.4 | 2.1 | 8.8 | 4.0 | 1.0 |
| Western Australia | 1.5 | 2.8 | 1.7 | 1.6 | 2.3 | 10.4 | 4.0 | 1.1 |
| Tasmania | 1.3 | 4.5 | 1.4 | 1.8 | 4.5 | 15.6 | 6.4 | 1.0 |
| Northern Territory | 2.6 | 4.0 | 2.9 | 5.2 | 3.3 | np | np | 1.7 |
| Australian Capital Territory | 2.8 | 7.0 | 2.3 | 1.5 | 4.9 | np | np | 2.4 |
| Australia | 0.7 | 1.9 | 0.9 | 1.4 | 0.9 | 5.8 | 1.8 | 0.6 |
| AVERAGE KILOMETRES TRAVELLED | | | | | | | | |
| New South Wales | 5.9 | 13.8 | 6.6 | 5.4 | 3.5 | 14.0 | 8.2 | 4.5 |
| Victoria | 5.1 | 25.4 | 5.7 | 5.7 | 4.0 | 20.3 | 8.2 | 3.9 |
| Queensland | 5.6 | 17.0 | 6.9 | 5.3 | 3.7 | 17.9 | 8.2 | 4.1 |
| South Australia | 5.5 | 14.4 | 7.1 | 7.3 | 5.3 | 20.9 | 6.2 | 4.1 |
| Western Australia | 5.2 | 17.9 | 5.2 | 12.0 | 4.3 | 18.5 | 5.9 | 3.8 |
| Tasmania | 4.5 | 25.5 | 5.4 | 5.6 | 6.6 | 27.1 | 15.3 | 3.3 |
| Northern Territory | 7.9 | 28.2 | 6.4 | 8.6 | 9.0 | 25.7 | 7.8 | 5.2 |
| Australian Capital Territory | 5.3 | 20.2 | 6.4 | 5.2 | 6.8 | 15.3 | np | 4.5 |
| Australia | 2.6 | 8.1 | 3.1 | 2.9 | 1.9 | 8.7 | 3.5 | 2.0 |

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 2010 estimate for total kilometres travelled by all passenger vehicles registered in Australia is 163,360 million kilometres (Table 4 of the publication). The rounded RSE for this estimate is 2.7%, as shown above. Therefore, the standard error for the 2010 kilometres travelled by passenger vehicles estimate is 4,410 million kilometres (2.7% of 163,360 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 158,949 million kilometres to 167,770 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 154,540 million kilometres to 172,180 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 variables are shown in the following tables. The RSEs of further detailed variables can be made available on request.

TECHNICAL NOTE DATA QUALITY INDICATORS *continued*

RSE OF FUEL CONSUMPTION(a), 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 | | | | | | | | |
| Petrol | 3.7 | 8.7 | 5.6 | 21.5 | 99.0 | 45.3 | 13.3 | 3.2 |
| Diesel | 16.7 | 99.9 | 6.1 | 3.4 | 2.0 | 12.0 | 4.7 | 3.0 |
| LPG/CNG/dual fuel | 15.9 | — | 16.1 | 40.0 | 30.8 | 66.1 | 16.9 | 11.4 |
| Total | 3.2 | 8.7 | 3.3 | 3.3 | 2.0 | 11.6 | 4.0 | 2.1 |

| AVERAGE RATE OF FUEL CONSUMPTION | | | | | | | | |
|----------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Petrol | 1.8 | 2.7 | 1.6 | 10.1 | 100.0 | 9.2 | 3.9 | 1.5 |
| Diesel | 4.6 | 100.0 | 1.8 | 1.7 | 0.7 | 7.7 | 2.4 | 2.2 |
| LPG/CNG/dual fuel | 4.5 | — | 3.9 | 37.8 | 8.6 | 19.3 | 13.7 | 3.7 |
| Total | 1.6 | 2.7 | 1.2 | 1.7 | 0.7 | 7.3 | 2.3 | 1.0 |

— nil or rounded to zero (including null cells)

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

SAMPLING ERROR *continued*

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

| | Light commercial vehicles | Rigid trucks | Articulated trucks | Total |
|------------------------------|---------------------------------|-----------------|-----------------------|------------|
| | % | % | % | % |
| TOTAL TONNE-KILOMETRES | | | | |
| New South Wales | 20.4 | 11.5 | 3.9 | 3.7 |
| Victoria | 12.6 | 9.8 | 4.8 | 4.1 |
| Queensland | 15.9 | 7.9 | 5.8 | 4.9 |
| South Australia | 15.4 | 11.6 | 7.1 | 6.0 |
| Western Australia | 12.4 | 14.1 | 6.4 | 5.7 |
| Tasmania | 14.7 | 12.4 | 8.2 | 6.7 |
| Northern Territory | 13.2 | 9.2 | 15.9 | 14.4 |
| Australian Capital Territory | 23.6 | 18.8 | 27.8 | 14.1 |
| Australia | 8.4 | 5.5 | 2.5 | 2.3 |

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

TECHNICAL NOTE DATA QUALITY INDICATORS *continued*

SAMPLING ERROR *continued*

9 Summary tables in this publication contain estimates for earlier years. Because of cost and provider load constraints, the SMVU cannot be designed to provide accurate measures of the movements between reference periods. Care should be taken in drawing inferences from changes in data over these years.

10 The standard error for the movement 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 2006 and 2010 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

| | LEVEL ESTIMATES | | | | MOVEMENT ESTIMATES | |
|---------------------------|-----------------|----------|----------------|----------|--------------------|-------------------|
| | 2006 | | 2010 | | Movement | SE (Movement) (a) |
| | mill. | RSE (%) | mill. | RSE (%) | | |
| Type of vehicle | | | | | mill. | mill. |
| Passenger vehicles | 156 184 | 2 | 163 360 | 3 | 7 176 | 5 683 |
| Motor cycles | 1 641 | 10 | 2 394 | 8 | 752 | 256 |
| Light commercial vehicles | 35 210 | 2 | 42 715 | 3 | 7 505 | 1 590 |
| Rigid trucks | 8 040 | 3 | 9 011 | 3 | 971 | 373 |
| Articulated trucks | 6 151 | 2 | 6 917 | 2 | 766 | 172 |
| Non-freight trucks | 261 | 13 | 210 | 10 | -51 | 39 |
| Buses | 1 917 | 4 | 2 024 | 4 | 107 | 107 |
| Total | 209 405 | 2 | 226 632 | 2 | 17 227 | 6 013 |

(a) 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 in analysing the movements in the estimates. For example, the estimate of movement for passenger vehicles is an increase of 7,176 million kilometres and the standard error is 5,683 million kilometres, which means there are 19 chances in 20 that the true movement estimate is between a decrease of 4,190 million kilometres and an increase of 18,542 million kilometres.

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 by providers, 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 2010.

TECHNICAL NOTE DATA QUALITY INDICATORS *continued*

*Response and non-response
continued*

After removing those vehicles that had been found to be deregistered or out of scope, the live response rate for the 2010 SMVU was 84%.

RESPONSE AND NON-RESPONSE BY CATEGORY

| | <i>Percentage of selections 2010</i> |
|---------------------------------------|----------------------------------------------|
| | % |
| Response received | |
| Registered vehicle | 79 |
| Unregistered vehicle(a) | 5 |
| 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 quarter 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 Live response rates for each state and territory, and for each vehicle type, are shown in the following tables:

LIVE RESPONSE RATES, State/Territory

| | <i>Response rate</i> |
|------------------------------|--------------------------|
| | % |
| New South Wales | 86 |
| Victoria | 83 |
| Queensland | 85 |
| South Australia | 86 |
| Western Australia | 86 |
| Tasmania | 84 |
| Northern Territory | 74 |
| Australian Capital Territory | 82 |
| Australia | 84 |

*Response and non-response
continued*

LIVE RESPONSE RATES, Type of vehicle

| | Response rate |
|--------------------------------|------------------|
| | % |
| Type of vehicle | |
| Passenger vehicle | 81 |
| Motor cycles | 80 |
| Light commercial vehicles | 81 |
| Rigid trucks | 85 |
| Articulated trucks | 86 |
| Non-freight carrying trucks | 86 |
| Buses | 85 |
| Total | 84 |

16 A large non-response increases the potential magnitude of 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 including the proportion of deregistered, out of scope and nil use vehicles are the same as for responding vehicles.

Frame quality

17 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 31 October 2010 (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 15.7 million vehicles was identified on 31 March 2009 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.

18 The responses received in the SMVU provide an indication of the quality of the frame. In 2010, 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 0.2% of the total frame. This indicates the frame was reliable in terms of providing an accurate number of registered vehicles in Australia.

19 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 7 and 19 months). Vehicle classification anomalies can also result from data supplied by state and territory vehicle registration authorities. An assessment of vehicle classification anomalies from 2010 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, 21.8% were found to be other vehicle types, 15.4% 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

20 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. As for previous surveys, the need for imputation of unanswered items on the returned questionnaires remained quite high. This is called partial imputation.

TECHNICAL NOTE DATA QUALITY INDICATORS *continued*

Imputation continued

21 Total fuel consumption can be difficult to collect, being derived from the product of total distance travelled and the average fuel consumption rate. The average fuel consumption rate can be reported directly by the respondent or derived from the respondent reporting an amount of fuel consumed and the distance travelled on that fuel (for all or part of the period). If records have not been kept during the reference period, it can be difficult for the provider to provide or reasonably estimate fuel consumption. If this is the case the fuel consumption rate is imputed from the average of 'like' responding providers.

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.

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 | 26 | 42 |
| Victoria | 15 | 31 | 38 |
| Queensland | 18 | 25 | 39 |
| South Australia | 16 | 25 | 37 |
| Western Australia | 14 | 23 | 37 |
| Tasmania | 18 | 23 | 46 |
| Northern Territory | 30 | 41 | 58 |
| Australian Capital Territory | 19 | 28 | 37 |
| Australia | 16 | 27 | 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 | 17 | .. | 43 |
| Motor cycles | 16 | .. | 34 |
| Light commercial vehicles | 17 | 41 | 40 |
| Rigid trucks | 14 | 28 | 36 |
| Articulated trucks | 14 | 26 | 27 |
| Non-freight carrying vehicles | 12 | .. | 32 |
| Buses | 10 | .. | 19 |
| Total | 16 | 27 | 39 |

.. not applicable

(a) Includes both partial and full imputation

SURVEY PROCEDURES

23 The survey is comprised of four independent samples, with a different one used for each 3 month quarter 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.

TECHNICAL NOTE DATA QUALITY INDICATORS *continued*

Adjustments

24 The SMVU measures 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 2010 SMVU, the frame was created on 31 March 2009. 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.

CONTRIBUTION OF ADJUSTMENTS FOR RE-REGISTRATIONS, Australia

| | PERCENTAGE OF TOTAL KILOMETRES TRAVELLED | | | | |
|-------------------------------|---------------------------------------------|--------------|--------------|--------------|--------------|
| | SMVU 2004 | SMVU 2005 | SMVU 2006 | SMVU 2007 | SMVU 2010 |
| | % | % | % | % | % |
| Type of Vehicle | | | | | |
| Passenger vehicles | 1 | 3 | 1 | 3 | 2 |
| Motor cycles | 6 | 4 | 7 | 7 | 8 |
| Light commercial vehicles | 2 | 1 | 3 | 2 | 2 |
| Rigid trucks | 4 | 2 | 4 | 2 | 3 |
| Articulated trucks | 4 | 4 | 2 | 4 | 4 |
| Non-freight carrying vehicles | 6 | 1 | 3 | 2 | 6 |
| Buses | — | -2 | — | -2 | 6 |
| Total | 2 | 3 | 2 | 3 | 2 |

— nil or rounded to zero (including null cells)

CONTRIBUTION OF NEW VEHICLES REGISTERED AFTER 31 MARCH

| | PERCENTAGE OF TOTAL KILOMETRES TRAVELLED | | | | |
|-----------------------------|---------------------------------------------|-----------|-----------|-----------|----------|
| | 2004 | 2005 | 2006 | 2007 | 2010 |
| | % | % | % | % | % |
| Type of vehicle | | | | | |
| Passenger vehicles | 10 | 11 | 11 | 10 | 9 |
| Motor cycles | 15 | 16 | 16 | 15 | 11 |
| Light commercial vehicles | 14 | 14 | 14 | 14 | 10 |
| Rigid trucks | 13 | 12 | 12 | 12 | 8 |
| Articulated trucks | 18 | 19 | 20 | 17 | 11 |
| Non-freight carrying trucks | 13 | 14 | 14 | 9 | 8 |
| Buses | 12 | 15 | 15 | 16 | 5 |
| Total | 11 | 12 | 12 | 11 | 9 |

25 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.

Pre-advice methodology

26 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

TECHNICAL NOTE DATA QUALITY INDICATORS *continued*

*Pre-advice methodology
continued*

three months apart) provide reliable estimates of total distance travelled without a recall bias.

Nil use

27 Some providers may report nil use for the 3 month reference period in which they were selected. Nil use vehicles are live registered vehicles that reported travelling zero kilometres during that specific reference period only. 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

| | 2004 | 2005 | 2006 | 2007 | 2010 |
|--------------------------------------------|----------------|----------------|----------------|----------------|----------------|
| NUMBER OF REGISTERED VEHICLES WITH NIL USE | | | | | |
| Passenger vehicles | 406 865 | 393 971 | 409 471 | 456 884 | 561 613 |
| Motor cycles | 92 953 | 73 570 | 100 725 | 125 547 | 148 217 |
| Light commercial vehicles | 93 220 | 103 683 | 115 841 | 114 241 | 122 227 |
| Rigid trucks | 24 214 | 32 944 | 36 263 | 36 660 | 34 647 |
| Articulated trucks | 3 967 | 4 105 | 4 340 | 3 680 | 5 165 |
| Non-freight carrying trucks | 1 547 | 1 518 | 1 448 | 1 418 | 2 424 |
| Buses | 1 319 | 1 303 | 1 343 | 1 510 | 2 831 |
| <i>Total</i> | <i>624 085</i> | <i>611 094</i> | <i>669 430</i> | <i>739 940</i> | <i>877 123</i> |

PROPORTION OF REGISTERED VEHICLES WITH NIL USE (%)

| | | | | | |
|-----------------------------|----------|----------|----------|----------|----------|
| Passenger vehicles | 4 | 4 | 4 | 4 | 5 |
| Motor cycles | 24 | 17 | 22 | 25 | 23 |
| Light commercial vehicles | 5 | 5 | 6 | 5 | 5 |
| Rigid trucks | 7 | 9 | 9 | 9 | 8 |
| Articulated trucks | 6 | 6 | 6 | 5 | 6 |
| Non-freight carrying trucks | 9 | 8 | 7 | 7 | 11 |
| Buses | 2 | 2 | 2 | 2 | 4 |
| <i>Total</i> | <i>5</i> | <i>4</i> | <i>5</i> | <i>5</i> | <i>6</i> |

DISTRIBUTIONS

28 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 quarter 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 1,002 kilometres or less for the quarter 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.

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

TECHNICAL NOTE DATA QUALITY INDICATORS *continued*

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 | 1 002 | 2 078 | 2 523 | 3 178 | 4 749 | 9 167 | 16 122 |
| Victoria | 1 121 | 2 350 | 2 788 | 3 232 | 5 130 | 8 397 | 17 227 |
| Queensland | 974 | 2 120 | 2 464 | 3 039 | 5 072 | 8 756 | 10 711 |
| South Australia | 876 | 1 673 | 2 066 | 2 727 | 4 072 | 6 771 | 11 747 |
| Western Australia | 1 277 | 2 206 | 2 668 | 3 296 | 4 983 | 8 407 | 14 081 |
| Tasmania | 897 | 1 632 | 2 227 | 2 818 | 4 570 | 7 833 | 13 269 |
| Northern Territory | 1 249 | 1 956 | 2 468 | 3 082 | 4 978 | 10 381 | 18 740 |
| Australian Capital Territory | 1 623 | 2 719 | 3 044 | 3 416 | 4 862 | 7 496 | 10 165 |
| Australia | 1 048 | 2 154 | 2 581 | 3 109 | 4 952 | 8 610 | 14 461 |
| Motorcycles | | | | | | | |
| New South Wales | 30 | 350 | 712 | 901 | 1 613 | 4 045 | 4 681 |
| Victoria | — | 18 | 175 | 318 | 1 059 | 2 822 | 5 214 |
| Queensland | 4 | 300 | 560 | 837 | 1 872 | 5 537 | 11 259 |
| South Australia | — | 99 | 296 | 513 | 1 414 | 2 809 | 4 725 |
| Western Australia | — | 150 | 269 | 430 | 1 136 | 2 362 | 4 579 |
| Tasmania | — | 112 | 257 | 354 | 785 | 4 681 | 5 715 |
| Northern Territory | 23 | 284 | 362 | 495 | 1 366 | 5 850 | 18 724 |
| Australian Capital Territory | — | 292 | 593 | 855 | 1 462 | 4 393 | 5 980 |
| Australia | — | 195 | 358 | 599 | 1 359 | 4 228 | 7 368 |
| Light commercial vehicles | | | | | | | |
| New South Wales | 1 049 | 3 018 | 3 420 | 4 173 | 6 242 | 13 269 | 18 924 |
| Victoria | 724 | 2 692 | 3 823 | 4 467 | 7 621 | 12 516 | 16 294 |
| Queensland | 891 | 2 632 | 3 430 | 4 660 | 6 875 | 13 260 | 19 483 |
| South Australia | 659 | 1 815 | 2 855 | 4 025 | 6 308 | 10 840 | 14 846 |
| Western Australia | 967 | 2 699 | 3 491 | 4 146 | 6 216 | 9 967 | 15 941 |
| Tasmania | 713 | 1 880 | 2 454 | 3 560 | 5 996 | 8 500 | 12 003 |
| Northern Territory | 1 159 | 2 352 | 2 840 | 3 670 | 5 368 | 8 928 | 17 712 |
| Australian Capital Territory | 1 623 | 3 036 | 3 670 | 4 155 | 6 291 | 9 677 | 13 783 |
| Australia | 901 | 2 652 | 3 430 | 4 269 | 6 753 | 12 784 | 18 924 |
| Rigid trucks | | | | | | | |
| New South Wales | 799 | 2 412 | 3 547 | 4 726 | 8 133 | 16 939 | 33 448 |
| Victoria | 407 | 2 160 | 3 384 | 4 451 | 8 947 | 19 245 | 33 471 |
| Queensland | 524 | 2 112 | 3 225 | 4 452 | 8 542 | 16 743 | 26 107 |
| South Australia | 288 | 1 640 | 2 388 | 3 707 | 7 041 | 14 630 | 36 320 |
| Western Australia | 59 | 1 411 | 2 484 | 3 776 | 8 111 | 16 440 | 28 327 |
| Tasmania | 293 | 1 384 | 2 286 | 3 355 | 6 746 | 15 610 | 28 474 |
| Northern Territory | 391 | 1 280 | 1 891 | 2 790 | 5 285 | 10 246 | 19 108 |
| Australian Capital Territory | 1 740 | 3 607 | 4 298 | 5 391 | 8 730 | 18 889 | 29 061 |
| Australia | 465 | 2 099 | 3 143 | 4 364 | 8 302 | 16 889 | 33 255 |
| Articulated trucks | | | | | | | |
| New South Wales | 3 287 | 10 613 | 14 887 | 20 969 | 37 976 | 57 126 | 72 652 |
| Victoria | 1 268 | 9 359 | 14 798 | 21 122 | 42 420 | 60 216 | 91 014 |
| Queensland | 3 055 | 12 387 | 18 588 | 26 921 | 43 781 | 60 771 | 79 630 |
| South Australia | 1 715 | 6 458 | 11 457 | 16 401 | 38 544 | 62 336 | 106 928 |
| Western Australia | 1 402 | 8 026 | 12 069 | 17 080 | 30 799 | 56 222 | 89 398 |
| Tasmania | 2 638 | 12 448 | 16 538 | 22 693 | 32 920 | 55 197 | 70 458 |
| Northern Territory | 260 | 4 687 | 8 563 | 15 504 | 27 466 | 46 687 | 57 880 |
| Australian Capital Territory | 8 469 | 27 021 | 31 779 | 35 065 | 44 058 | 58 097 | 74 131 |
| Australia | 1 982 | 9 926 | 14 730 | 21 046 | 39 419 | 59 852 | 84 050 |

— nil or rounded to zero (including null cells)

(a) Based on distance travelled in a quarter.

TECHNICAL NOTE DATA QUALITY INDICATORS *continued*

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 | 982 | 3 677 | 4 724 | 5 185 | 8 097 | 12 718 | 12 943 |
| Victoria | 168 | 567 | 957 | 1 061 | 2 973 | 4 987 | 5 562 |
| Queensland | 169 | 641 | 1 428 | 2 504 | 4 973 | 11 476 | 13 539 |
| South Australia | — | 210 | 281 | 618 | 2 031 | 8 070 | 13 874 |
| Western Australia | 52 | 391 | 683 | 1 012 | 3 818 | 6 834 | 9 783 |
| Tasmania | 56 | 265 | 336 | 640 | 3 049 | 7 183 | 16 791 |
| Northern Territory | np | np | np | np | np | np | np |
| Australian Capital Territory | np | np | np | np | np | np | np |
| Australia | 151 | 567 | 1 012 | 1 604 | 4 760 | 9 783 | 12 943 |
| Buses | | | | | | | |
| New South Wales | 2 002 | 3 969 | 5 671 | 6 872 | 10 674 | 20 170 | 37 179 |
| Victoria | 1 619 | 3 199 | 5 493 | 6 171 | 9 684 | 22 393 | 37 735 |
| Queensland | 1 266 | 2 813 | 3 970 | 4 706 | 9 344 | 22 524 | 34 899 |
| South Australia | 2 734 | 4 315 | 5 511 | 6 334 | 12 177 | 19 085 | 25 209 |
| Western Australia | 961 | 3 354 | 4 768 | 5 991 | 11 426 | 19 786 | 29 165 |
| Tasmania | 1 144 | 2 811 | 4 615 | 5 588 | 10 481 | 20 372 | 57 473 |
| Northern Territory | np | np | np | np | np | np | np |
| Australian Capital Territory | np | np | np | np | np | np | np |
| Australia | 1 558 | 3 439 | 4 779 | 6 141 | 10 250 | 20 627 | 34 899 |
| Total | | | | | | | |
| New South Wales | 951 | 2 078 | 2 678 | 3 323 | 5 047 | 11 014 | 17 231 |
| Victoria | 985 | 2 295 | 2 788 | 3 260 | 5 241 | 9 790 | 20 537 |
| Queensland | 949 | 2 102 | 2 538 | 3 328 | 5 356 | 9 524 | 17 154 |
| South Australia | 779 | 1 637 | 2 066 | 2 753 | 4 457 | 8 386 | 13 177 |
| Western Australia | 1 024 | 2 045 | 2 650 | 3 305 | 5 211 | 9 370 | 15 924 |
| Tasmania | 741 | 1 585 | 2 226 | 2 836 | 4 909 | 8 002 | 13 815 |
| Northern Territory | 1 076 | 1 956 | 2 489 | 3 094 | 5 219 | 10 473 | 20 614 |
| Australian Capital Territory | 1 477 | 2 566 | 3 008 | 3 416 | 4 880 | 7 496 | 16 152 |
| Australia | 949 | 2 090 | 2 627 | 3 233 | 5 156 | 9 768 | 17 231 |

— nil or rounded to zero (including null cells)

(a) Based on distance travelled in a quarter.

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

TECHNICAL NOTE DATA QUALITY INDICATORS *continued*

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 | — | — | 60 | 178 | 1 093 | 5 171 | 8 943 |
| Victoria | — | — | 8 | 148 | 1 161 | 3 896 | 7 719 |
| Queensland | — | — | — | 64 | 942 | 3 430 | 6 774 |
| South Australia | — | — | 43 | 272 | 1 083 | 3 033 | 9 150 |
| Western Australia | — | — | 59 | 202 | 1 096 | 3 694 | 5 569 |
| Tasmania | — | — | — | 12 | 490 | 2 493 | 6 319 |
| Northern Territory | — | — | — | 155 | 1 011 | 4 116 | 5 858 |
| Australian Capital Territory | — | — | 54 | 238 | 998 | 3 423 | 5 995 |
| <i>Australia</i> | — | — | 12 | 142 | 1 012 | 3 847 | 7 698 |
| Rigid trucks | | | | | | | |
| New South Wales | 313 | 1 742 | 2 950 | 5 196 | 17 476 | 86 100 | 310 690 |
| Victoria | 168 | 1 914 | 3 059 | 5 436 | 16 432 | 80 329 | 278 747 |
| Queensland | 390 | 2 608 | 4 360 | 6 687 | 19 495 | 87 642 | 307 929 |
| South Australia | 103 | 1 882 | 3 215 | 5 707 | 15 680 | 71 256 | 292 628 |
| Western Australia | — | 1 333 | 2 818 | 6 398 | 18 219 | 69 883 | 545 218 |
| Tasmania | 20 | 1 112 | 2 416 | 4 560 | 14 467 | 69 498 | 272 805 |
| Northern Territory | 304 | 1 170 | 2 631 | 3 933 | 10 036 | 36 181 | 71 090 |
| Australian Capital Territory | 748 | 3 472 | 5 244 | 7 949 | 24 714 | 98 215 | 362 912 |
| <i>Australia</i> | 205 | 1 811 | 3 264 | 5 653 | 17 677 | 78 851 | 299 975 |
| Articulated trucks | | | | | | | |
| New South Wales | 30 641 | 109 445 | 164 512 | 262 691 | 717 700 | 1 515 028 | 2 390 542 |
| Victoria | 10 318 | 79 663 | 151 576 | 264 868 | 746 431 | 1 575 076 | 2 435 911 |
| Queensland | 28 835 | 134 058 | 237 948 | 381 920 | 910 182 | 1 731 980 | 2 107 508 |
| South Australia | 10 197 | 70 353 | 141 050 | 235 910 | 800 413 | 2 118 103 | 3 368 246 |
| Western Australia | 14 584 | 91 838 | 158 834 | 263 972 | 690 637 | 2 176 265 | 4 856 542 |
| Tasmania | 23 744 | 163 474 | 268 653 | 331 722 | 528 739 | 1 342 085 | 1 947 699 |
| Northern Territory | 284 | 48 820 | 173 129 | 271 320 | 752 675 | 1 680 626 | 2 701 238 |
| Australian Capital Territory | 76 221 | 344 787 | 447 975 | 522 560 | 967 275 | 1 324 880 | 1 861 879 |
| <i>Australia</i> | 18 101 | 105 689 | 169 454 | 290 235 | 768 299 | 1 656 959 | 2 996 112 |

— nil or rounded to zero (including null cells)

(a) Based on distance travelled in a quarter

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 | <p>These areas are based on capital city Statistical Divisions as defined in the <i>Australian Standard Geographical Classification (ASGC) 2008</i>.</p> <p>Sydney — this includes the area bounded by Gosford and Wyong; Hawkesbury and Blue Mountains; Campbelltown, Wollondilly and the Sutherland Local Government Areas.</p> <p>Melbourne — this includes the area bounded by Werribee, Melton, Sunbury, Craigieburn, Whittlesea, Healesville, Warburton, Berwick, Pakenham and the whole of Mornington Peninsula.</p> <p>Brisbane — this includes the area bounded by Caboolture, the eastern part of Pine Rivers, Redcliffe, Redland, Logan, Ipswich and Wolffdene.</p> <p>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.</p> <p>Perth — this includes the area bounded by Yanchep and Bullsbrook; Warnbro, Keysbrook and York.</p> <p>Hobart — this includes the area bounded by New Norfolk; Sorell and Carlton Creek; Brighton and Snug.</p> <p>Darwin — this includes Darwin and suburbs, Palmerston and other areas north of the Howard Springs turn-off.</p> <p>Canberra — this includes all of the Australian Capital Territory.</p> |
| Commodity carried | The publication of commodities carried is based on the 10 sectional groupings of the <i>Australian Transport Freight Commodity Classification (ATFCC)</i> , 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). |

GLOSSARY *continued*

| | |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 | <p>These are based on the <i>Australian Standard Geographical Classification (ASGC) 2008</i> 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.</p> <p>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.</p> <p>Victoria — within the areas of Geelong, Ballarat, Bendigo, Wodonga (excluding Albury), Shepparton, La Trobe Valley and Mildura.</p> <p>Queensland — within the areas of the Sunshine Coast, Bundaberg, Hervey Bay, Rockhampton, Mackay, Townsville, Cairns, Gold Coast (excluding Tweed Heads) Toowoomba and Gladstone.</p> <p>Western Australia — within the areas of Mandurah and Bunbury.</p> <p>Tasmania — within the areas of Launceston, Burnie, Devonport, Penguin, Ulverston, Wynyard and Latrobe.</p> <p>This category is not applicable in South Australia, the Northern Territory and the Australian Capital Territory.</p> |
| 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. |

GLOSSARY *continued*

| | |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 transshipment 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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