

## 1. PURPOSE AND OBJECTIVES

This Group Technical Standard defines the minimum requirements to eliminate or minimise the risk of fatalities, injuries and incidents arising from the use of light vehicles, Multi-Purpose Vehicles (MPVs / mini-buses) and buses.

## 2. SCOPE

This Standard applies to all Anglo American Group managed businesses and operations, including contractors and visitors when involved in controlled activities and is mandatory for all vehicle(s) owned by Anglo American or Business Units and / or for Anglo American or Business Unit paid or contracted services.

This Standard applies to all light vehicles, MPVs and buses used for work-related activities and for transporting people and light loads. Examples of vehicles covered by this Standard are passenger cars, four-wheel drives (including all-wheel drives), Sports Utility Vehicles (SUVs), Light Delivery Vehicles (LDVs) (pick-ups, utilities, bakkies and panel vans), mini-buses and buses.

The application of this Standard is mandatory when private vehicles are being used for business purposes.

## 3. PLANNING AND DESIGN

- 3.1 Vehicle and safety system selection shall be based on a risk assessment taking account of tasks, application, environment, roll-over protection and rating of sturdiness in the event of a crash. The Guideline to this Standard illustrates a recommended automated algorithm to assist with vehicle and safety system selection.
- 3.2 Light vehicles and MPVs shall have dynamically tested roll-over protection for all vehicles intended for the following use, (with the exception of vehicles used exclusively on public roads):
- In pit use;
  - Steep inclines (greater than 25 degrees, for examples embankments);
  - Exploration;
- Unless NCAP 5 star rated vehicles (2012 or later) are used in conjunction with controls to mitigate risk. Current vehicles are permitted to stay in use until the end of vehicle life or up to Q4 2018, whichever comes first.
- 3.3 All roll-over protection systems shall be designed to ensure:
- That the intrusion into the cab is in accordance with ISO 3164;
  - Internal roll over protection systems are not permitted in new acquisitions or contracts;
  - No change in centre of gravity during all phases of roll-over, as achieved by high attenuation load off-set devices.
- 3.4 Buses shall be designed in accordance with the following industry standards:
- Australia: The in-country Australian Design Recommendation number 59 (ADR 59);
  - Africa: The in-country South African National Standard 1563;
  - Europe: The United Nations Standard: UN-ECE-R66;
  - The Americas: The United Nations Standard: UN-ECE-R66;
  - Asia: Either UN-ECE-R66 or ADR 59.
- 3.5 The use of double-decker buses is not permitted unless exempted by risk assessment.
- 3.6 Systems shall be in place to ensure that risks associated with vehicle journeys are managed and controlled. The systems shall include, but not be limited to:
- Journey management plans shall be in place for journeys over two hours in duration, further than 100km or if the journey is unusual;
  - Identification and monitoring of the risks associated with the number of journeys, routes, intersections, time of day etc. To ensure that the overall exposure is reduced;

- Assessment and communication of changed environmental and road conditions at the time of travel;
  - Outline of actions required in the event of an emergency (e.g. collision or breakdown);
  - Provision to manage driver fatigue.
- 3.7 A site-based review of pedestrian interaction, road design and layouts (including entrance and exit points, intersections and other potential points of interaction between light vehicles and other mobile equipment) shall be conducted and shall be updated when changes to layouts are required. Traffic segregation should be used to separate pedestrians, light vehicles and other mobile equipment.
- 3.8 A site-based traffic management plan shall be in place including, but not limited to:
- Setting of appropriate speed limits for vehicle types, road surfaces and environmental conditions;
  - Overtaking standards;
  - Procedures for light vehicles entering hazardous or restricted areas;
  - Clear communication protocols;
  - Standards for safe following distances based on operational circumstances, environmental conditions and near sight (blind spot) limitations of other mobile equipment;
  - Installation and maintenance of road traffic control signs as appropriate to the work site;
  - Parking procedures (e.g. safe parking distances/locations) and required barriers from heavy mobile equipment and pedestrians.
- 3.9 All vehicles shall have the following minimum safety features:
- Three point seat belts for all occupants, with the exception of buses where two point lap belts are permitted. All seatbelt anchors to be designed to equal or better the seatbelt strength;
  - All seats shall be equipped with head restraints;
  - Cargo barriers and load restraints for all vehicles designed for carrying loads (other than passengers), or that are unable to have cargo separated from the vehicle's occupant-carrying space;
  - Driver and front passenger air bags for light vehicles and MPVs. Buses are excluded;
  - Anti-lock Braking System (ABS). Current vehicles are permitted to stay in use until end of vehicle life or until Q4 2018, whichever comes first.
  - Where vehicles are used on public roads Electronic Stability Programme (ESP/ ESC) is mandatory. Buses are excluded from the ESP/ESC requirement.
- 3.10 All vehicles that interact with heavy mobile equipment and/or mobile plant shall have:
- Systems that enable positive communication with the equipment operator and/or mobile plant (e.g. radio communication);
  - Systems that enhance vehicle visibility by operators of heavy mobile equipment and / or mobile plant.
- 3.11 All vehicles operating on site should be fitted with signage allowing for easy and positive vehicle identification from a reasonable distance.
- 3.12 All vehicles shall have:
- First aid kit;
  - Emergency roadside triangles or beacons;
  - Survival or emergency equipment suitable for the operating environment;
  - One reflective vest.
- 3.13 A change management process shall accompany all vehicle modifications, including the attachment of any equipment. Examples of changes or modifications to the vehicle include:
- Overall body structure or design;
  - Original manufacturer fitted type of tyres or wheels;

- Suspension system;
- Electrical, safety, control, electronic or mechanical system;
- Centre of gravity;
- Load-carrying capacity;
- Ability to withstand a crash (e.g. the fitment of a “bull bar”).

3.14 All operations shall ensure that an Emergency Response Plan is in place.

#### 4. IMPLEMENTATION AND MANAGEMENT

- 4.1 A formal inspection and preventative/condition-based maintenance system shall be in place to ensure that vehicles are maintained in a safe and roadworthy condition. Inspection and maintenance shall be undertaken on critical items such as:
- Wheels, including tyres, rims, locking rings, air valves and wheel nut indicators;
  - Steering, suspension and braking systems;
  - Seats and seat belts;
  - Lamps, indicators and reflectors;
  - Windscreen and windows, including windscreen wipers and washers;
  - The vehicle structure itself. For buses, the bus structure shall be inspected annually for signs of damage, corrosion or metal fatigue;
  - Other safety-related items on the vehicle body, chassis or engine, including instrumentation.
- 4.2 Seat belts shall be used in all cases by all occupants.
- 4.3 A pre-operation vehicle safety check and familiarisation system shall be in place and used by the driver.
- 4.4 Vehicle day running lights or low-beam headlamps shall be switched on at all times when the vehicle is in operation.
- 4.5 Mobile telephones, whether hands-free or not, shall only be used by the driver of a vehicle when the vehicle is stationary, in a safe location.
- 4.6 Passengers are not allowed to be transported in LDV load bins.
- 4.7 Controls shall be in place to ensure the safety of people working on roads, including those working on broken-down vehicles.
- 4.8 All employees, contractors and visitors shall be inducted in appropriate road safety and site vehicle hazards.
- 4.9 A permit or certification system shall be in place to ensure drivers are authorised and competent to operate the type of vehicle/s in the intended environment, whether that is internal or external to an Anglo American site.
- 4.10 A system shall be in place to verify that drivers of Anglo American vehicles have a valid and appropriate level public road driver’s licence prior to being allowed to operate an Anglo American vehicle.
- 4.11 A system shall be in place to ensure that drivers receive adequate training to ensure that the vehicle intended to be operated or driven can be operated or driven safely. As a minimum, training should include:
- Behaviour-based defensive driving principles;
  - Vehicle familiarisation, taking into account the vehicle’s handling dynamics, maximum number of passengers, load limits and various features;
  - Loading and restraining principles where the vehicle to be operated is designed for carrying cargo loads;

- Education about and awareness of driving and travel risks that may be encountered within the environment where the vehicle may be operated or driven and the requirements of keeping to traffic rules and speed limits;
  - Emergency breakdown procedures;
  - Basic mechanical principles, including how to change a tyre and perform an adequate pre-operation check.
- 4.12 A system shall be in place to ensure that persons operating any equipment associated with a light vehicle (e.g. vehicle-mounted cranes and winches) are suitably trained and accredited.
- 4.13 Behaviour-based observations shall include the operation of the relevant vehicles. Any need for additional specific retraining shall incorporate the results of these observations.
- 4.14 A fit-for-work policy shall be in place, incorporating the clearly-defined maximum levels of prescribed medication and zero alcohol allowed in the system of drivers/operators.
- 4.15 A system shall be in place to manage driver fatigue, which shall include a formal system to be used on site and a risk assessment and procedures for off-site driving.
- 4.16 All drivers allocated to the transportation of people shall undergo psychomotor testing (this requirement only applies to professional appointed bus and/or MPV drivers).

## 5. PERFORMANCE MONITORING

- 5.1 Any traffic or vehicle safety incidents and accidents shall be reported.

## APPENDIX A: REFERENCED DOCUMENTS

Document Number	Previous Number(s)	Title
AA TS 000 001	New Document	Master List of Definitions
AA TS 101 002	AA GTG 27	Light Vehicles, MPVs and Buses Guideline

## APPENDIX B: RECORD OF AMENDMENTS

Issue 0	:	New document based on AA AFRS 1 (J. Wannenburg, May 2011)
Version 2	:	Document updated to include buses and additional requirements. Document Title revised. (J. Ford, K Waelbers, B. Vos, J. Coetzee, F. Coetzee, T. Venter, L. Thomsen, August 2014).
Version 3	:	Document Application revised and requirements updated. (J. Ford, K Waelbers, B. Vos, J. Coetzee, F. Coetzee, T. Venter, L. Thomsen, November 2014).
Version 4	:	Revised Standard criteria and new template format applied. Content updated based on the results of an Issue Based Risk Assessment (Bowtie analysis). (Kurt Waelbers, Lenelle Thomsen, Christian Jensen Montt, Juan Antonio Trujillio, Bernard Vos, Craig du Plessis, Deirdre Lingenfelder, Jeremias Pieterse, Sagie Pillay, John Soar, Ludovic Le Cam, Nick Barlow, Thys Greyvensteyn, August 2016).