

# ROPS / FOPS FACT SHEET

## Occupational Safety and Health Regulations

### POWERED MOBILE PLANT;

**4.44 (2)** Subject to regulation 4.45, a person who supplies powered mobile plant for use at a work place must ensure that the plant is fitted with suitable and adequate operator protective devices to reduce as far as practicable, the risk of injury or harm to the operator.

**4.44 (4)** If powered mobile plant at a workplace is fitted with a roll over protective structure then a person who, at the workplace, is an employer, the main contractor or a self employed person must ensure that-

(a) the protective structure complies with AS 1636 or **AS 2294**; or

(b) the protective structure has been designed by a suitably qualified engineer to a standard that provides at least the same level of protection as would be provided if the protective structured complied with AS 1636 or **AS 2294**.

## Mines Safety and Inspection Regulations

### ROLL OVER PROTECTION FOR SURFACE EARTH MOVING MACHINERY;

4.15 (1) A reference in this regulation to "earth moving machinery" includes any unit of earth moving equipment that has been modified to perform other service functions (including operation as a road watering tanker truck) but does not include machinery that is only used underground. (2) The principle employer at, or the manager of, a mine must ensure that - (a) each earth moving machinery unit used at the mine is fitted with a roll over protective structure that conforms with **AS 2294**;

## Australian Standard AS 2294

### Earth-moving machinery protective structures

**TESTING;** Prior to certification of a frame of protective structure, a prototype of each structure and machinery assembly shall be tested in accordance with either the requirements of this standard or one of the alternative standards given in clause 6.

**CERTIFICATION;** The manufacturer shall attach a plate to the protective structure confirming that it is the same as the prototype tested in accordance with this standard.

**ALTERNATIVES TO PHYSICAL TESTING;** Theoretical analysis of roll over protective structures performance with earth-moving machinery shall NOT be used as an alternative to physical testing.

**REPLACEMENT OF STRUCTURE;** Where a machine has been involved in an incident which has resulted in discernable deformation of the protective structure, the damaged structure will not be reused.

**REPAIR;** Repairs to a roll over protective structure may be carried out provided that the repairs are :-

Made to the satisfaction of the manufacturer;

Made to the satisfaction of the authorised representative of the manufacturer; or

Certified by a person who is experienced with the design of roll over protective structures.

### **Australian Standards UPDATE!**

“A Roll Over Protective Structure complying with ISO 3471, SAE J1040 (etc) shall be deemed to comply with this standard (AS2294)”

For international conformity the *Standards Australia Committee* adopted, as separate parts, the appropriate *International Standards*, ISO 3471:1994, ISO 3449:1992 & ISO 3164:1995 to form the basis of AS 2294-1997. The standard now comprised of 4 parts.

Because these international standards are published separately and are therefore unlikely to be revised simultaneously it was agreed that AS2294 would follow suit to facilitate an easier adoption of any future editions of the *International Standard*.

ISO 3471 was updated in August 2008 after a review of the criteria for roll over protective structures (ROPS) It was determined that the then current criteria was based on mid-range size machines. Since the initial criteria was established both smaller and larger machine have become common.

The new document ISO 3471:2008 effectively replaces AS2294.2-1997 (Part 2)

The changes primarily relate to the testing of different styles and shapes of ROPS, additionally they have added force and energy equations relative to Rigid Frame Dumper – Including dump body.

The testing requirement for Rigid Frame Water & Service Vehicles has not changed.

Appropriate ISO and SAE are deemed to comply with AS2294.

## **ADDITIONAL REQUIREMENTS FOR SPECIAL VEHICLES**

**RIGID FRAME WATER WAGONS;** where a rigid frame vehicle is used as a water wagon, the roll over protective structure shall be designed in accordance with the requirements for rigid frame dumpers using the ROPS-only option.

**SERVICE VEHICLES;**

*Articulated frame vehicles;* Where an articulated vehicle is used as a service vehicle, the roll over protective structure shall be designed in accordance with the requirements for a tractor portions of tractor scrapers, water wagons, articulated steer dumpers, bottom-dump wagons and towed fifth wheel attachments.

*Rigid Frame Vehicle;* Where a rigid frame vehicle is used as a service vehicle, the roll over protective structure shall be designed in accordance with the requirements for rigid frame dumpers using the ROPS-only option.



**THIS IS OUR TEST RIG, COME IN AND TOUCH IT, ASK TO TOUCH YOUR SUPPLIERS UNIT!**

