

SECTION 8 PERIODIC INSPECTION, ADJUSTMENT AND TESTING OF EXISTING EQUIPMENT

8.1 PERIODIC INSPECTION AND TESTS

8.1.1 Frequency

Governors, buffers, rails, safety gear and associated operating mechanisms shall be inspected, adjusted and tested at periods as shown in Table 8.1.1 or as per manufacturer's recommendation if a lesser period.

All inspections, adjustments and tests shall be recorded and the records maintained for all items listed in Table 8.1.1.

8.1.2 Rail condition inspection

Rails shall be visually inspected to ensure that no corrosion, distortion or contamination is present which may affect safety gear operation.

8.1.3 Governors

8.1.3.1 Inspection

Governors shall be cleaned, lubricated, inspected and adjusted as per the manufacturer's specification. The governor shall be actuated manually to ensure that all parts operate freely and correctly and are without excessive wear.

8.1.3.2 Testing

A calibration test of the governor shall be carried out to check—

- (a) the mechanical and electrical speed settings, and
- (b) the pull-through force applied on the governor rope,

for compliance with Section 34 of AS 1735.2.

Where adjustment involves the breaking of a seal, the seal shall be replaced.

NOTE: The tripping speed for mechanical and electrical overspeed devices may be achieved by disconnecting the governor from the system and driving the governor manually or by a motor-driven device with gradual acceleration to the required speed.

8.1.4 Inspection of safety gear and associated equipment

The safety gear and associated equipment shall be cleaned, lubricated, inspected and adjusted where necessary to ensure that it is in satisfactory working condition and that the clearances and wear are within this Standard's specification and the manufacturer's specifications.

The force on the governor rope to activate the safety gear shall be measured and shall comply with Section 33 of AS 1735.2.

8.1.5 Tests of safety operating system

8.1.5.1 Type A safety gear

Type A safety gear shall be tested in accordance with Clause 5.3, except that the car shall be without load and shall descend at the rated speed. Where existing safety gear operates on timber, the test speed may be reduced to not less than 0.25 m/s. The governor, where provided, shall be tripped manually. The safety gear shall stop the car at a very short distance without significant slide.

NOTE: Rectification of rails and timber backing, where applicable, may be required after each test.

8.1.5.2 Types B, C and D safety gear

The following tests shall be carried out, as appropriate:

- (a) *No load test* Types B, C and D safety gear shall be operated by tripping the governor manually with the car unloaded and descending at the slowest operating inspection speed. After the safety gear has stopped the lift, power to the lift motor shall be maintained for sufficient time to demonstrate that the safety gear is effectively engaged.

In the case of type B safety gear, the safety gear shall stop the car promptly. The stopping distance is not required to comply with the minimum stopping distance nominated in Section 33 of AS 1735.2.

In the case of types C and D safety gear, the car shall stop subsequent to the appropriate tiller rope pull out and the pertinent buffer stroke respectively.

- (b) *Performance test* For types C and D safety gear, to demonstrate performance in accordance with Section 33 of AS 1735.2, a full load, governor tripping speed, drive-in or runaway test as per Section 5 shall be carried out.

NOTE: For type B safety gear, the performance test is under review.

8.1.6 Oil buffer inspection and test

Oil buffers shall be tested by driving the car or counterweight respectively onto their buffer at the speeds and loads specified in Table 8.1.1. After the test, the buffer shall be checked for leaks and to confirm its return to the normal position.

8.1.7 Tests for broken suspension operated safety gear

Broken suspension operated safety gear shall be tested in accordance with Clause 5.7.2, except that the car shall be without load.

To demonstrate the stopping capabilities of broken suspension operated safety gear carry out a full load test in accordance with Clause 5.7.4.

8.1.8 Tests of safety rope operated safety gear

Safety rope operated safety gear shall be tested in accordance with Clause 5.8 except that the car shall be without load.

To demonstrate the stopping capabilities of safety rope operated safety gear carry out a full load test in accordance with Clause 5.8.

8.2 TESTS FOLLOWING ANY ALTERATION AFFECTING PERFORMANCE OF SAFETY GEAR

8.2.1 General

Where a lift is modified in such a way that it will affect the performance of the safety gear, the governor and safety gear shall be tested and shall pass the relevant tests detailed in Clauses 8.2.2 and 8.2.3. Such modifications include increase of rated load, speed, alteration of the car involving an alteration to its deadweight, alteration or replacement of safety gear and replacement of guide rails or changing from oiled to dry rails, or vice versa.

8.2.2 Governors

Governors, where provided, shall be cleaned, inspected, adjusted and tested in accordance with Clause 8.1.3.

8.2.3 Safety gear

8.2.3.1 Inspection and adjustment

The safety gear shall be cleaned, inspected, lubricated and adjusted in accordance with Clause 8.1.4.

8.2.3.2 Tests

The safety gear shall be tested with a rated load in the car in accordance with Section 5.

TABLE 8.1.1
FREQUENCY OF PERIODIC INSPECTION, ADJUSTMENT AND TESTS

Equipment	Inspection/Test	Relevant Clause	Frequency in years		
			1	5	10
Governor	Clean, lubricate and check for free operation, inspect jaws and sheave for wear	8.1.3.1		*	
	Test pull through	8.1.3.2		*	
	Check electrical and mechanical trip	8.1.3	*		
Safety gear (all types)	Clean, lubricate, check free operation	8.1.4	*		
	Check activation force	8.1.4		*	
	Inspect the wedge size and wear (if applicable) against design Standard and tolerance	8.1.4	*		
Safety gear (Type A)	Carry out no load test on safety gear, manually trip governor, at rated speed	8.1.5.1	*		
Safety gear (Types B, C And D)	Carry out no load test on safety gear, manually trip governor, at inspection speed (See Note)	8.1.5.2(a)	*		
Safety gear (Types C and D)	Carry out performance test (See Note)	8.1.5.2(b)			*
Safety gear (Broken suspension operated type)	Carry out test on safety gear in accordance with Clause 5.7.2 except that the car shall be without load	8.1.7	*		
	Carry out full load test on safety gear in accordance with Clause 5.7.4 to demonstrate the stopping capabilities of the safety gear	8.1.7		*	
Safety gear (Safety rope operated type)	Carry out test on safety gear in accordance with Clause 5.8, except that the car shall be without load	8.1.8	*		
	Carry out full load test on safety gear in accordance with Clause 5.8 to demonstrate the stopping capabilities of the safety gear	8.1.8		*	
Oil buffers	Check integrity and operation on empty car at inspection speed	8.1.6	*		
Rail	Check condition visually for contamination	8.1.2	*		
Rope	Check condition as per Appendix B of AS 1735.2	—	*		

NOTE: The brake tests as set out in Appendices A, C and E have to be carried out before safety gear and load tests.