



June 17<sup>th</sup>, 2020  
Dear Sir/Madam,

Sandvik Mining and Rock Technologies is a global leader of various mining equipment including loaders and haul trucks. Each year we manufacture and deliver over 500 various loaders and trucks to different mine in countries around the world.

For typical incline and decline travelling, a 15% (8.5 degrees) ramp gradient is comfortably within the maximum allowable gradient of our mining equipment of 26.7% (15 degrees). From our experience with mines around the world, we typically see ramp gradients between 15%-17%, and some even steeper. Some newer mines have been known to design their ramps with a steeper 17% gradient to allow faster development to get down to the ore more quickly. Therefore, Sandvik's line of underground mining equipment is designed to safely transverse these types of gradients. Below is reference chart for different gradient measurements.

Degrees	Percent	Ratio
5	8.8%	1 : 11.4
8.5	15.0%	1 : 6.7
10	17.6%	1 : 5.7
15	26.8%	1 : 3.7

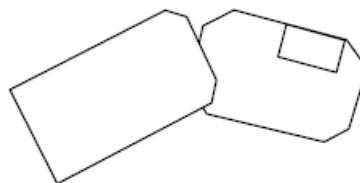
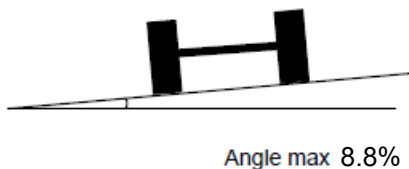
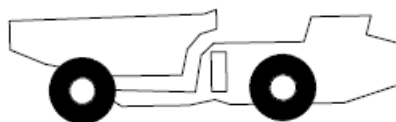
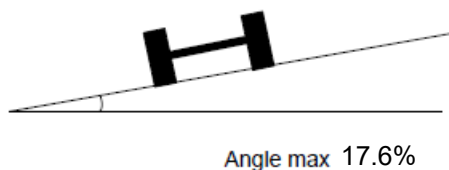
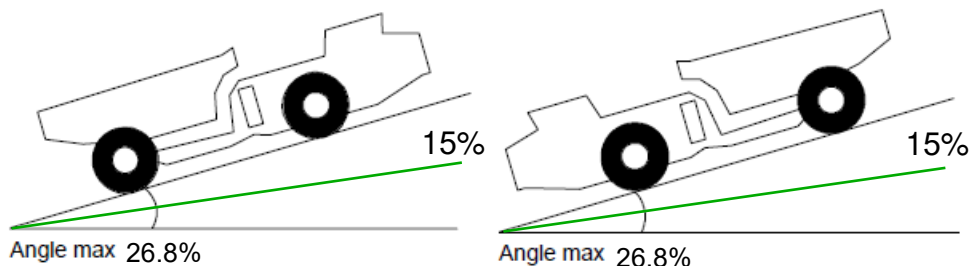
At Sandvik considerable design and testing goes into our products to determine the maximum operating gradients to ensure for safe working conditions. The maximum allowed inclination angles can vary between machine types and sizes. These maximum operating gradients are outlined in each of our machine's operator manuals.

Sandvik designs and builds equipment to serve a wide variety of underground mines. This can range from cold to hot, dry and dusty to wet and damp, high altitude to low altitude. Various environmental extremes can dictate the need for either special options (i.e. high altitude, or Arctic temperatures, or high corrosive resistance), or special maintenance practices (i.e. more frequent servicing requirements in dusty environments such as air filter replacements and radiator cleaning), or special operational requirements (i.e. slower speeds on rough ramps or tighter turns). There has rarely been any underground mining condition which cannot be handled by a Sandvik machine; however, any extremes should be discussed with a Sandvik representative to determine if anything specific is required.

Machine operators must be properly trained and follow safety protocols which are set forth by the mine site. For incline and decline travel this would include items such as reduced travel speeds and smooth steering/articulating motions.

Please refer to the following pages which overviews the maximum allowable gradients for some of our underground mining equipment which are also shown in the operator manuals.

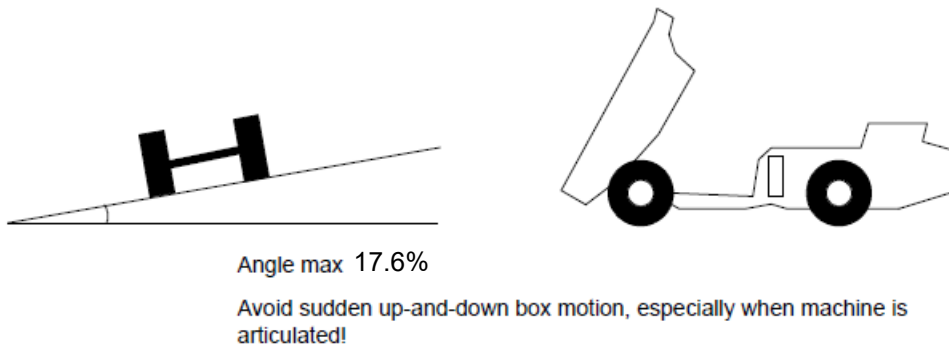
**During hauling and parking**



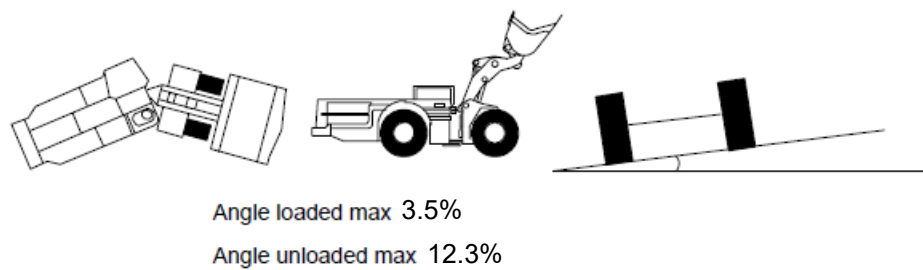
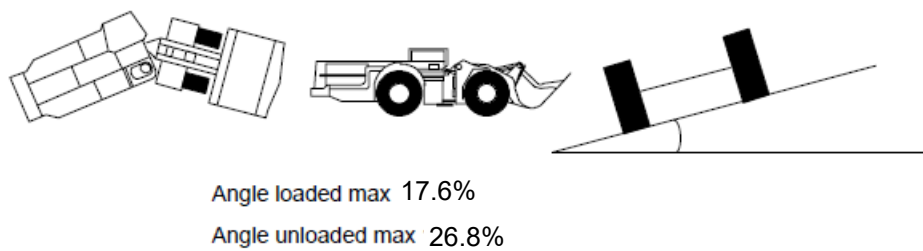
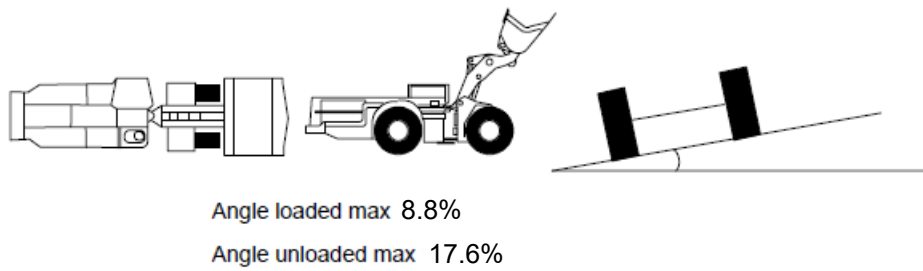
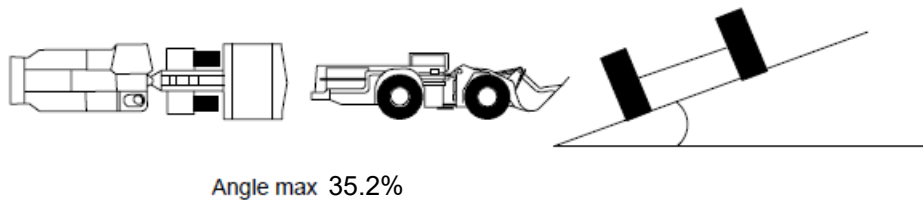
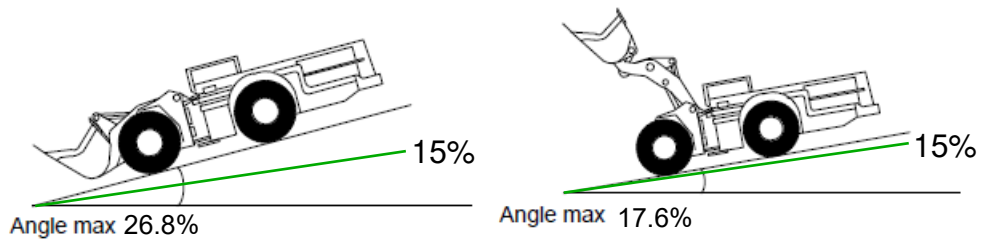
Be careful and drive slowly when approaching dumping station!  
Avoid sudden up-and-down box motion, especially when machine is articulated!

**During dumping procedure**

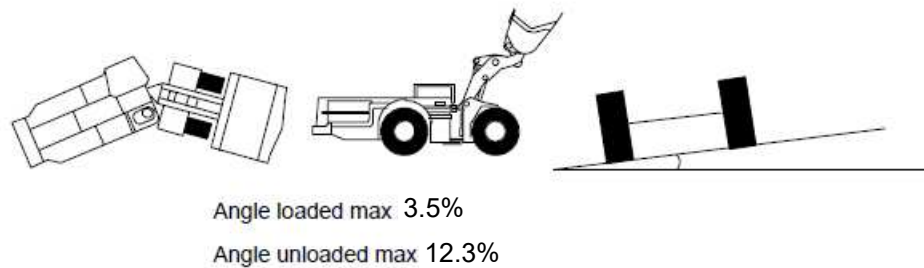
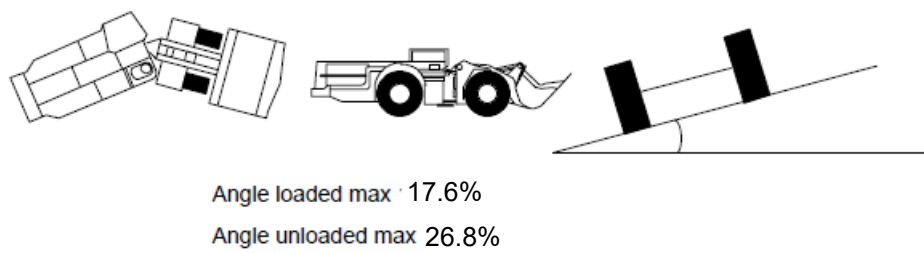
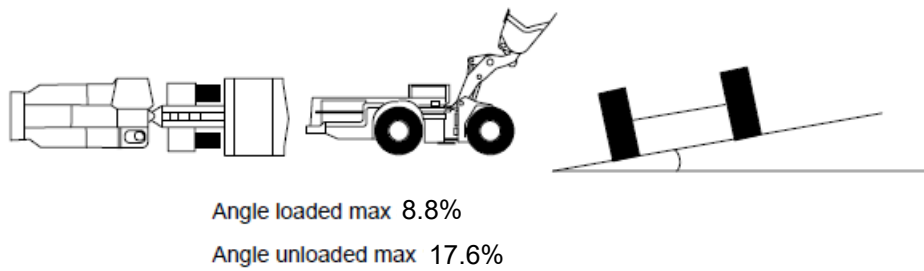
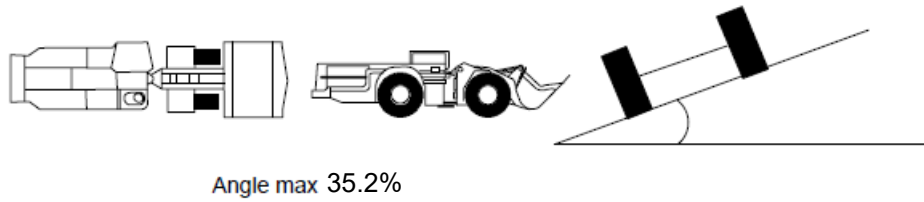
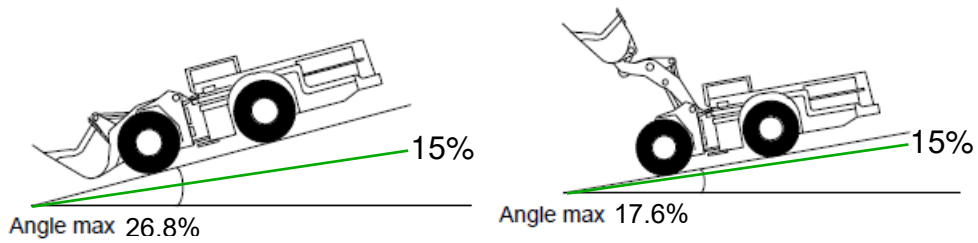
Be careful and drive slowly when approaching dumping station!






**Maximum allowed inclination angles**

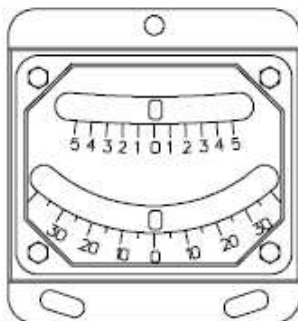


**Maximum allowed inclination angles**



### 2.3.4 Maximum inclination angles

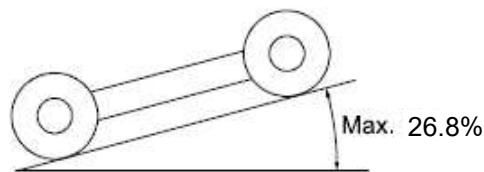
 <b>WARNING</b>	
 	<p><b>TIPPING HAZARD!</b> Incorrect trammig or parking procedures could result in death or severe injury.</p> <p>Do not tram, park or operate the machine on a slope that exceeds the maximum inclination angles.</p>



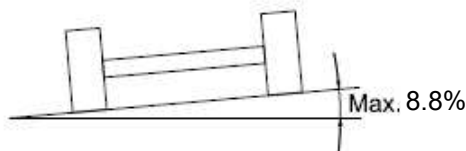
The machine's inclination angle indicators are located in the operator station.

#### *During trammig and parking*

During trammig and parking, the maximum inclination angles are allowed only when the booms are in trammig position.



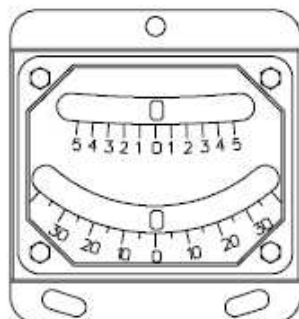
The maximum front tilt angle during trammig and parking is 26.8%



The maximum side tilt angle during trammig and parking is 8.8%

2.3.4 Maximum inclination angles

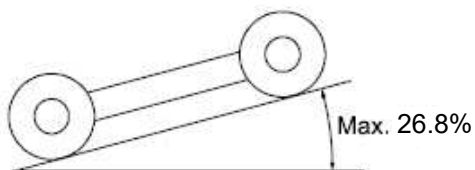
 <b>WARNING</b>	
 	<p><b>TIPPING HAZARD!</b>            Incorrect tramping or parking procedures could result in death or severe injury.</p> <p>Do not tram, park or operate the machine on a slope that exceeds the maximum inclination angles.</p>



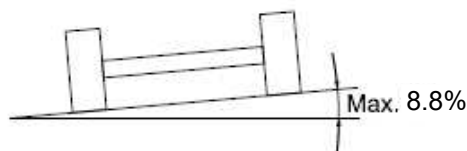
The machine's inclination angle indicators are located in the operator station.

***During tramping and parking***

During tramping and parking, the maximum inclination angles are allowed only when the booms are in tramping position.



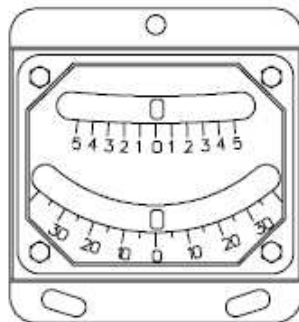
The maximum front tilt angle during tramping and parking is 26.8%



The maximum side tilt angle during tramping and parking is 8.8%

### 2.3.4 Maximum inclination angles

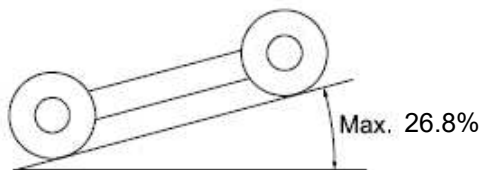
 <b>WARNING</b>	
 	<p><b>TIPPING HAZARD!</b></p> <p>Incorrect tramping or parking procedures could result in death or severe injury.</p> <p>Do not tram, park or operate the machine on a slope that exceeds the maximum inclination angles.</p>



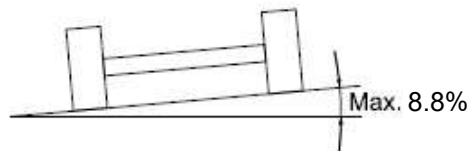
The machine's inclination angle indicators are located in the operator station.

#### ***During tramping and parking***

During tramping and parking, the maximum inclination angles are allowed only when the booms are in tramping position.



The maximum front tilt angle during tramping and parking is 26.8%



The maximum side tilt angle during tramping and parking is 8.8%

### 2.3.4. Maximum inclination angles during tramming and parking

#### WARNING



#### TIPPING HAZARD

Never exceed the specified maximum inclination angles. The maximum angles are allowed only when boom is in the tramming position.



The rig must not be trammed or parked on a slope that exceeds the maximum inclination angle.

The maximum front tilt angle during tramming and parking is 26.8%

The maximum side tilt angle during tramming and parking is 8.8%

