

Health and Safety Executive		Sector Information Minute	
Agriculture and Food Sector		SIM 01/2003/53 (formerly 05/2003/06)	
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Target Audience
FOD inspectors inspecting food premises
Specialist Group Inspectors (Engineering)

SAFEGUARDING STANDARDS FOR PLANETARY MIXERS

This SIM informs inspectors of the Food Section's current views on safeguarding planetary mixers. The guidance given is for information and no special action is required

NEW MACHINES

1 A European Standard on planetary mixers, BS EN 454 was published in March 2000 requiring different levels of safeguarding dependant on the size of the mixer bowl. For a Class 1 mixer (bowl size => 5l but < 10l) a bowl extension ring is required, or a minimum distance from top of beater to top of bowl of 120mm. For a Class 2 mixer (bowl size => 10l but < 150l) a trip bar or a fully interlocked guard is required. For a Class 3 mixer (bowl size => 150l but < 500l), a fully interlocked guard is required.

2 Inspectors should ensure that any machines supplied after March 2000 meet the requirements of BS EN 454 or achieve an equivalent level of safety. The standard is not retrospective so does not apply to machines supplied before that date.

OLDER MACHINES

3 The Provision and Use of Work Equipment Regulations 1998 will apply to the use of planetary mixers supplied before March 2000 (as well as later machines) and questions have been raised by users of planetary mixers, and inspectors, about the standard of safeguarding which should be applied. The Food Section is aware that there is a large population of older machines in use, some as much as 40 years old.

4 The Food Section's view is that any upgrading of existing machines to meet the requirements of BS EN 454 is not justified on the basis of the current very low accident history. However, for Class 2 and 3 machines, a number of companies offer retrofitting of interlocked guards and we would encourage fitting of these where a risk assessment shows that there may be special risk

factors associated with the work, for example the use of the machines in training establishments.

5 Most accidents which do occur happen when people reach into the bowl with the mixer arm still revolving, eg to scrape down the sides, or when the machine is accidentally switched on during cleaning of either the bowl or the beater arm.

6 HSE published guidance has in the past asked for the use of bowl extension rings wherever possible. Whilst bowl extension rings make access to trapping points slightly more difficult and may offer a marginal improvement in safety, their primary purpose is to prevent spatter when processing products whose volume increases during mixing. For this reason, extension rings on existing machines should only be pressed for where the employer's risk assessment indicates a clear reduction in injury risk.

7 It is important that training and supervision emphasise that employees should never try to 'feel' the mix, never try to scrape down the bowl when the machine is running and never reach into the bowl when adding ingredients.

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