

	<b>HM Railway Inspectorate &amp; Safety Policy Directorate</b>	<b>Rail Guidance Document RGD-2005-06</b>	
<b>HMRI LEGAL INFORMATION: CONTROL OF VIBRATION AT WORK REGULATIONS 2005</b>			
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<b><u>Consultees</u></b>	Topic Leaders: Jill Moore, Occupational Health; Anna O'Connor, Employee Safety; David Whitmarsh, Topic Manager.		
<b><u>Keywords</u></b>	LEGAL, VIBRATION, HAV, WBV, COVAWR		
<b><u>Summary</u></b>	<b>Control of Vibration at Work Regulations (CoVaWR)</b>  The Control of Vibration at Work Regulations 2005 came into force on Wednesday 6 July. These Regulations will have significant implications for the rail industry and its contractors.		

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### **Detail**

HSE has set up a new Vibration section on its website <http://www.hse.gov.uk/vibration/> which provides general information on vibration and includes links to the following:

- [Guidance on these regulations](#) (pocket cards and employers leaflets)
- [New vibration at work regulations help prevent up to two million employees from occupational ill health](#) (press release)
- [Guide explaining tiered system of HAV Health Surveillance](#)
- [Health monitoring for back pain in drivers of industrial and agricultural vehicles and plant](#)
- [Noise and Vibration Roadshow 2005 – How to manage the risks](#)
- [Press notice 'Noise and Vibration regulations hit the road'](#)
- [Control of Vibration at Work Regulations 2005](#)
- [Inspector training pack](#)

General information can also be found in the priced publication Hand Arm Vibration, L140, which replaces HSG88. A separate book, due to be published before the end of 2005, will provide guidance on those parts of the Regulations which apply only to WBV.

[Annexe A](#) (also available on the FOD Legal Bulletin Board) sets out general principles of inspection and enforcement of the new Regulations, and key differences between previous HSE guidance and the new guidance for CoVaWR.

### **Purpose:**

The purpose of this note is to:

1. Draw to your attention the new Regulations, in force since 6 July 2005, which implement the Physical Agents (Vibration) Directive;
2. Identify significant points of which you need to be aware; and
3. Refer you to available guidance.

### **Who needs to know?**

All RI staff involved in inspection and investigation work. Would you please cascade this information to support staff who may also need to be aware.

### **Significant points:**

1. New Regulations, but HSE approach largely unchanged.
2. RI is following the HSE line on inspection and enforcement.
3. Inspectors should not carry out proactive inspection for WBV.
4. Focus on high risk activities, as identified in HSE guidance.
5. The Regulations introduced, for both HAV and WBV, two specific defined exposure values: the Daily Exposure Action Value, (EAV), the level of daily exposure to vibration above which certain actions are required to be taken to reduce exposure; and the Daily Exposure Limit Value (ELV), which is the maximum amount of vibration an employee may be exposed to on any single day.
6. There is a transitional period for the ELV for both HAV and WBV until July 2010. (This is extended to 2014 for WBV in the forestry and agricultural sectors only.) This means that work equipment first provided to employees prior to 6 July 2007 does not need to comply with the ELV until the transitional period is over. All other regulations are already in force.
7. HMRI is in the process of developing an occupational health strategy, which will include a short section on HAVS.

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### **Further information**

The HSE web site, <http://www.hse.gov.uk/vibration/> provides further information, which may be of help for both inspectors and employers alike.

For further details, please contact Graeme Royal on ext 6834, Rose Court.

Jill Moore is the HMRI contact on HAVS (VPN 516-8358).

### **Action** **(optional)**

Any inspector contemplating enforcement action is advised to discuss the proposed action initially with their Band 2, and/or Jill Moore.

## **The Control of Vibration at Work Regulations 2005 - CoVAWR**

The purpose of this note is to inform you of the new regulations to implement the Physical Agents (Vibration) Directive to be introduced on 6 July 2005. There will be one set of regulations covering control of risks from hand-arm vibration, HAV, and control of risks from whole body vibration, WBV. This will be the first time there has been specific regulations in respect of control of risks from exposure to vibration and HSE will therefore move from enforcement based on general duties under HSWA and topic guidance to application of specific vibration legislation.

This note is intended to provide you with sufficient information, to equip you to respond to questions and/or concerns relating to the requirements of the CoVAWR regulations.

Full training will be provided, later this year, on a regional or office basis and this will cover introduction to the regulations, draft guidance, the revised topic based inspection pack, enforcement guidance, the revised Enforcement Management Model, EMM & any revisions to the strategy based on programme plans.

If you require further information or assistance in the meantime you should contact your local noise and vibration specialist or medical inspector as necessary. The HSE web site, <http://www.hse.gov.uk/vibration/> provides further information which may be of help for both inspectors and employers alike.

### **KEY MESSAGES in respect of HAV**

- First specific regulations dealing solely with exposure to vibration
- New regulations but HSE approach largely unchanged
- Focus on high risk activities
- Health surveillance required for exposures above  $2.5 \text{ ms}^{-2}$

### **Important Notes:**

Previous HSE guidance on HAV referred to two exposure levels -  $2.8 \text{ ms}^{-2}$  and  $5.6 \text{ ms}^{-2}$ . The new regulations introduce two specific defined exposure values. The Exposure Action Value, (EAV), where employers are required to start to implement controls & Exposure Limit Value (ELV), which represents a maximum exposure limit which should not be exceeded.

There is no legal duty to comply with ELV until 6 July 2007 and employers can continue to purchase or hire new tools and put them into use so long as there is no reasonably practicable alternative tool or process which will prevent the ELV being exceeded. From 6 July 2007 all tools purchased or supplied for use must be able to be used without the ELV being exceeded. This period of transition should not be seen as a time to relax any present regime for managing risk or implementing reasonably practicable controls to reduce risk below the ELV. This should be carried out in accordance with the general principles of control detailed in CoVAWR.

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The values in the new regs. are based on different measurement technique. As a guide the previous guidance action value, of  $2.8 \text{ ms}^{-2}$ , equates to about approx  $4 \text{ ms}^{-2}$  in the new regs. Since this value is close to the new ELV of  $5.0 \text{ ms}^{-2}$  HSE is to target enforcement action, at this time, in relation to the reasonably practicable control of exposure at or above the limit value. When requesting emission data from suppliers, manufacturers etc. or employers, inspectors should ensure that the data provided is based on triaxial measurement and not single axis measurement. If in doubt consult your N & V specialist. Any comparisons or calculations of exposure for the new regulations should be based on data from triaxial measurement.

**TABLE 1**

**Comparison of guidance (pre 6 July 2005) exposure values & new regulation exposure values (CoVAWR 2005)**

Guidance	CoVAWR
	$2.5 \text{ ms}^{-2}$ (EAV)
$2.8 \text{ ms}^{-2}$	$4.0 \text{ ms}^{-2}$
	$5.0 \text{ ms}^{-2}$ (ELV)

### **The regulations in relation HAV**

Inspections should continue to be carried out where HAV is likely to be a matter of evident concern. That is likely where exposures are likely to be at or above  $4 \text{ ms}^{-2}$  i.e. where:

- Impulsive action tools (breakers, chipping hammers, needle guns) are in use for more than 30 minutes per day or;
- Industrial hand held power tools (such as grinders, Stihl saws, chainsaws etc. are regularly used for more than about 2 hours per day (i.e. finger on the trigger);
- Where tingling or numbness persists for 10 minutes or more after use of the tool.

Inspectors should continue to report their inspection findings on the inspection report form IRF1 and the three Risk Control Indicators indicated should continue to be used. See 'Important Note' below for information on the numerical exposure value for reporting purposes.

Employers have certain prescribed duties under CoVAWR and inspectors should be aware of these duties.

### **1. Risk Assessment**

Regulations consolidate the management of risk & exposure, and require specific risk assessment for vibration including HAV

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Risk assessment should identify:

- The employees exposed;
- Where there may be a risk from HAV;
- A soundly based estimate of employees' exposures and a comparison with the exposure action value and exposure limit value, see below;
- The reasonably practicable measures available to control exposure;
- The information, instruction & training required for employees;
- Sufficient information to the employer to enable him to take action to ensure compliance with duties in respect of CoVAWR regs. 6, 7 & 8 as necessary.

The assessment should be recorded and reviewed regularly if there are any significant changes to the work or the assessment is no longer valid and the date of assessment and name of competent person/s who carried it out should be recorded.

### **2. Exposure Action and Limit Values introduced in law for the first time.**

There are two exposure standards defined in the regulations this is therefore a stricter legal requirements than previously required.

Employers have certain duties at the EAV & ELV.

<b>The Exposure Action Value, EAV</b>	<b>2.5ms<sup>-2</sup></b>
<b>&amp;</b>	
<b>The Exposure Limit Value, ELV</b>	<b>5.0 ms<sup>-2</sup></b>

### **A guide to when exposures are likely to be at or above the EAV & ELV:**

#### ***High Risk (above the ELV)***

Employees who regularly operate:

- hammer action tools for more than about one hour per day;
- some rotary and other action tools for more than about two hours per day.

Employees in this group are likely to be above the **exposure limit value** set out in the Regulations.

#### ***Medium risk (above the EAV)***

Employees who regularly operate:

- hammer action tools for more than about 15 minutes per day;
- some rotary and other action tools for more than about one hour per day.

Employees in this group are likely to be exposed above the **exposure action value** set out in the Regulations.

It is not illegal to exceed 2.5 ms<sup>-2</sup>, EAV but there are requirements on what employers must do when exposure is likely to be above the EAV.

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Where exposures are likely to remain above the EAV after implementation of controls and management systems employers should implement a regime of health surveillance to monitor for injury and take action if it is identified.

The reasonably practicable controls detailed in the existing HAV topic pack, industry & sector specific guidance remain current. An updated pack and guidance will be issued prior to formal inspector training later in the year.

### **Weekly averaging**

The regulations allow for weekly averaging of exposure in certain defined circumstances. Employers may choose to average exposures over a weekly reference period. See specific details in the regulations for conditions.

This will normally be a relatively rare option however it may be useful in circumstances where exposures are intermittent or irregular i. e. gardening, wheel fitters, certain construction phases and it may help to get round certain circumstances where there are unduly high daily exposures.

Reasonably practicable controls should however be followed and this should not be used to allow over use of tools when it is unnecessary.

### **3. Control**

CoVAWR introduces a vibration specific hierarchy of control measures to be followed. Guidance on reasonably practicable controls can be found in the HAV topic pack which will only be available in hard copy from implementation of the regulations. Further briefings will provide details of publication, on the operational guidance intranet site, of the revised HAV topic pack.

### **4. Health Surveillance**

Health surveillance means specific HS to identify ill health resulting from exposure to vibration and is now a legal requirement specified in CoVAWR.

The regime for HS is tiered:

- Initial simple questionnaire for identification of potential ill-health;  
Referral to OH professional if positive answers identified;
- Crucially need to ensure feedback to employer and action on results.

### **The Regulations in relation to Whole Body Vibration - WBV**

The CoVAWR in respect of exposure to WBV is to focus on the risk of low back pain. However, most exposure to WBV is unlikely on its own to cause back pain. It may pose a risk of back pain when there is unusually high vibration or shock or the vibration is uncomfortable for a large part of the working day. Those most likely to experience high exposures to WBV are regular operators and drivers of off-road machinery such as: construction, mining and quarrying machines and vehicles, particularly earth moving machines such as scrapers, bulldozers, and building site

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dumpers, tractors and other agricultural and forestry machinery, particularly when used in transportation, tedding (turning hay), primary cultivation and mowing.

Normal road driving is unlikely to pose a risk of back pain.

However, it is likely that whole-body vibration is not the only cause, or indeed the main cause, of back pain. When investigating reports of risks from WBV exposure inspectors should consider all other possible risks factors e.g. ergonomics and manual handling, likely to contribute to back pain when determining whether or not they should take action.

If the inspector thinks there may be a risk from WBV exposure alone or that is likely to be a major contributing factor then a noise and vibration specialist and/or medical inspector should be consulted to make further investigations/enquiries.

**Inspectors should not carry out a proactive inspection for WBV and only carry out work on a reactive basis.**

### **KEY MESSAGES**

- New regulations but HSE approach largely unchanged
- Focus on high risk activities
- Sets EAV & ELV for WBV
- Health surveillance is not required for WBV however health monitoring is recommended

### **Advice for employers on action to take to reduce risk of back pain when driving or operating mobile machinery?**

- Make sure the vehicle is fit for the job, is well maintained and repaired and has no defective dampers, broken springs or seized suspension components
- Make sure you can operate the controls and can see clearly without stretching, twisting or leaning and that you are seated comfortably
- Choose routes avoiding rough surfaces and, if this is not possible, then drive more slowly to avoid bumping and jolting
- Operate any attachments smoothly, for example excavator buckets.
- Avoid bad postures, twisting or sitting in a static position for a long time. Take regular breaks
- Don't jump off the vehicle, or make other awkward movements that jar your back
- Avoid lifting and carrying awkward or heavy loads

### **The regulations**

The regulations place duties on employers to:

- Assess exposure in relation to and EAV & ELV (see below);

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- Implement appropriate reasonable practicable controls following the hierarchy set out in the regulations (following the general principles set out in guidance above should be sufficient to reduce risks).

### **The EAV and ELV**

The Exposure Action Value, ( $0.5 \text{ m/s}^2 \text{ A}(8)$ ), EAV is the level where employers are required to assess the risk from exposure to WBV and to take action when it is exceeded. The exposure limit value,  $1.15 \text{ m/s}^2 \text{ A}(8)$ , (ELV), is the maximum amount of vibration an employee may be exposed to on any single day (although again there are transitional arrangements which disapply this requirement where it is not reasonably practicable to comply at this time, see below for details). Operators of some off-road machines and vehicles may exceed the limit value but this will depend on the task, vehicle speed, ground conditions, driver skill and duration of operation.

What is the Transitional Period?

The Regulations allow a transitional period for the limit value until July 2010 (or until 2014 for the agricultural and forestry sectors). This only applies to machines or vehicles first supplied to operatives before July 2007. The exposure limit value may be exceeded during the transitional periods provided you have complied with all the other requirements of the regulations and taken all reasonably practicable actions to reduce risk.

Again for WBV, the regulations allow for weekly averaging of exposure in certain defined circumstances. Employers may choose to average exposures over a weekly reference period. See specific details in the regulations for conditions. This may be an important aspect of the regulations for agriculture where there may be fluctuation in use of machinery over a week.

### **Health Surveillance**

Health surveillance is not deemed to be appropriate for WBV since there is not a clear dose response relationship between level of exposure and risk of back pain. However, HSE recommends that you set up a simple system of health monitoring for your employees whose jobs carry higher than average risk of back pain.

**Brief guidance leaflets are available on application of CoVAWR to HAV & WBV for employers & employees.**