

# **TORR FORENSIC PARTNERSHIP MANUAL HANDLING: A TECHNICAL REVIEW**

## **1. Introduction**

- 1.1. *Manual handling is defined as "the transporting or supporting of loads by hand or bodily force."***
- 1.2. *The relevant legislation is the Manual Handling Operations Regulations 1992 (the Regulations) which came into force on 1 January 1993. The Regulations are made under the Health and Safety at Work etc. Act 1974 (the HSW Act). They implement European Directive 90/269/EEC on the manual handling of loads; supplement the general duties placed on employers and others by the HSW Act and the broad requirements of the Management of Health and Safety at Work Regulations 1992.***

## **2. Manual Handling Operations Regulations 1992**

- 2.1. *The Regulations require employers to: -***
  - 2.1.1. "So far as is reasonably practicable, avoid the need for his employees to undertake any manual handling operation at work which involves a risk to their being injured."<sup>1</sup>
  - 2.1.2. "Where it is not reasonably practicable to avoid the need for his employees to undertake any manual handling operations at work which involve a risk of their being injured... make a suitable and sufficient assessment of all such manual handling operations to be undertaken by them..."<sup>2</sup> and
  - 2.1.3. "...take appropriate steps to reduce the risk of injury to those employees arising out of their undertaking any such manual handling operations to the lowest level reasonably practicable."<sup>3</sup>
- 2.2. *These three clauses establish a clear hierarchy of measures to be taken by an employer:***
  - 2.2.1. Avoid hazardous manual handling operations so far as is reasonably practicable.
  - 2.2.2. Make a suitable and sufficient assessment of any hazardous manual handling operations that cannot be avoided.
  - 2.2.3. Reduce the risk of injury from those operations so far as is reasonably practicable.

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<sup>1</sup> Regulation 4 (1) (a) (i)

<sup>2</sup> Regulation 4 (1) (b) (i),

<sup>3</sup> Regulation 4 (1) (b) (ii)

### 3. Guidance on the Regulations

**3.1. "Manual Handling: Guidance on Regulations 1998" (the Guidance), an HSE publication gives guidance on the Regulations and provides advice on the action necessary to comply with them.**

- 3.1.1. A flow chart is included setting out the steps to be taken by an employer when following the Regulations. A copy is attached to this review.
- 3.1.2. An employer, having concluded that avoidance of manual handling is impossible, must consider if the task involves any risk of injury.
- 3.1.3. The Guidance contains a "Manual handling risk assessment detailed assessment guidelines filter". This includes a diagram giving "Guideline Weights" for men and women. A copy of the diagram is attached to this Review. Limiting loads to be handled to these weights "... will provide a reasonable level of protection to around 95% of working men and women." The Guideline Weights given for men will provide a reasonable level of protection to around 50% to 66% of working women<sup>4</sup>.
- 3.1.4. The Guideline Weights can be taken as representing values, which if not exceeded, are unlikely "... to create a risk of injury sufficient to warrant a detailed assessment."
- 3.1.5. The figures are for a stable body, both hands lifting in reasonable conditions for up to 30 operations per hour. If frequency is one or two times per minute, reduce by 30%. Five to eight times per minute, reduce by 50%. Twelve times per minute, reduce by 80%.
- 3.1.6. Where the handler, during the operation, twists to the side through 45°, reduce by 10% and through 90°, reduce by 20%.
- 3.1.7. If the handler, with feet side by side, has to lean forward then the Weights should be reduced by 50%.
- 3.1.8. Pushing and pulling operations are assumed to be executed with the force applied with the hands between knuckle and shoulder height. The guideline figure for starting or stopping the loads is a force of about 25 kg for men and about 16 kg for women. The guideline figure for keeping the load in motion is a force of about 10 kg for men and about 7 kg for women. This is dependent upon the means of transfer: sliding, rolling or on wheels.
- 3.1.9. No limit is given as to the distance over which the load is pushed or pulled, when on wheels. Loads that are carried, held against the body, should not be carried further than about 10 m without rest, without a reduction of the Guideline Weight.

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<sup>4</sup> HSE: "Getting to Grips with Manual Handling."

- 3.1.10. The Guidance addresses handling by two or more people and accept that the load a team can handle will be less than the sum of the individual capabilities and suggests a guide of two-thirds the sum of two persons. An assessment of the working environment is important.
- 3.1.11. The Guideline Weights are based on the assumption that there is no vibration from the loads being handled.
- 3.1.12. When a Risk Assessment is carried out the significant findings should be recorded and the record kept. However, the assessment need not be recorded if it could be very easily repeated or the handling operations are straightforward, of low risk, would last only a very short time and the time taken to record them would be disproportionate.
- 3.1.13. The Guidance contains an Assessment Checklist pro forma to assist in preparing a detailed Risk Assessment.
- 3.1.14. The Guidance indicates that there is no such thing as a completely safe manual handling operation. The Guideline Weights provide an initial filter where operations are unlikely to create risk of injury. Only if the Guideline Weights are exceeded is a more detailed assessment warranted in respect of lifting operations. The Guideline Weights are **not** statutory limits, which must not be exceeded under any circumstance.

**3.2. "Getting to grips with manual handling: a short guide for employers."**

- 3.2.1. This booklet was first produced by the HSE in March 1993 and was last revised in October 2000.
- 3.2.2. It contains, in a brief and diagrammatic format, the principal content of the "Guidance on Regulations". It contains the diagram "*General risk assessment guidelines*".
- 3.2.3. In summary, the publication provides the following advice.
- 3.2.3.1. Avoid the need for hazardous manual handling as far as reasonably practicable;**
- 3.2.3.2. Assess the risk of injury from any manual handling that cannot be avoided;**
- 3.2.3.3. Reduce the risk from hazardous manual handling as far as reasonably practicable. Employees should follow appropriate systems, make proper use of equipment and cooperate.**
- 3.2.4. The risk assessment is the employer's responsibility; most could be done in-house but advice from experts may be helpful. Employees should not be trained to make their own assessments. Significant findings should be recorded and kept unless the assessment can be easily repeated.

Generic assessments are acceptable. Mechanical aids should be considered.

3.2.5. Problems to be looked for are;

- 3.2.5.1. the need to hold loads away from the trunk;
- 3.2.5.2. twisting, stooping or reaching upwards;
- 3.2.5.3. large vertical movement;
- 3.2.5.4. long carrying distances;
- 3.2.5.5. strenuous pushing or pulling;
- 3.2.5.6. unpredictable movement;
- 3.2.5.7. repetitive handling;
- 3.2.5.8. insufficient rest;
- 3.2.5.9. a work rate imposed by a process;
- 3.2.5.10. are the loads heavy, difficult to grasp, unstable or harmful;
- 3.2.5.11. in the environment, are there constraints to posture, poor floors, variations in level, hot, cold or humid conditions, strong air movement, poor lighting or restrictions on movement or posture.

3.2.6. Training should ensure that the principles of good lifting are kept:

- 3.2.6.1. plan the lift and adopt feet apart position;
- 3.2.6.2. bend the knees, do not kneel;
- 3.2.6.3. keep the back straight;
- 3.2.6.4. keep shoulders level facing the same direction as hips, lean forward;
- 3.2.6.5. grip with the arms between the legs;
- 3.2.6.6. keep the load close to the trunk, the heavier side nearer the body or slide the load towards you before lifting
- 3.2.6.7. do not jerk
- 3.2.6.8. move the feet and do not twist the body;

3.2.6.9. put down, then slide or adjust position.

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