



MOM/OSHD/2022-02

18 JUL 2022

To: All Interested Parties

### USE OF FORKLIFTS AND EXCAVATORS AS LIFTING MACHINES

Between Feb and Apr 2022, three workers were killed in separate workplace accidents that were contributed by the unsafe use of forklifts. Two of the accidents involved forklifts lifting and transporting loads slung from the forks.

2 Forklifts are designed with the intent to load and unload goods on their forks. Similarly, excavators are designed as earth-moving construction machinery and have been observed to be used for lifting operations. **Both forklifts and excavators are, in general, not intended for use as lifting machines to carry out lifting operations.** This circular serves as a reminder on the safe use of forklifts and excavators as lifting machines.

3 **Forklifts and excavators** may be used as lifting machines if they fulfil the following criteria:

- i) The machine has been originally designed and manufactured, or supplied, to also function as a lifting machine (which shall include considerations whether the load lifted will be slung from the machine and whether the machine will be travelling with the load);
- ii) The machine is equipped with manufacturer- or supplier-approved attachment(s) or hook(s) with safety catch for lifting purposes;
- iii) The machine has a load capacity chart furnished by the manufacturer or supplier;
- iv) The machine has a safe working load (SWL) not exceeding 5 tonnes when used as a lifting machine;
- v) Information by the manufacturer or supplier on the safe use of the machine and its attachment/hook(s) for lifting is available;
- vi) Risk assessment shall be conducted to assess the additional risks arising from the use of the machine and its attachment/hook(s) for lifting; and
- vii) Any other applicable requirements as stipulated in the Workplace Safety and Health Act and its subsidiary legislation.

4 In addition to the above, **excavators** to be used as lifting machines must also be:

- i) Equipped with an accurate indicator which shows clearly to the operator, the working radius and the corresponding SWL at all times and gives a warning signal whenever the radius is in the unsafe zone; and

- ii) Examined and registered by an Authorised Examiner as lifting machines (lifting equipment classification code 699 – Other Mobile Cranes, n.e.c.).

**TRAINING REQUIREMENTS FOR OPERATORS**

5 All forklift operators must attend the **WSQ Operate Forklift Course**.

6 With effect from **28 September 2022**, newly appointed excavator operators must attend the **Hydraulic Excavator Operation (As Lifting Machine) Course<sup>1</sup>**. All existing excavator operators are strongly encouraged to make arrangements to attend the Hydraulic Excavator Operation (As Lifting Machine) Course.

7 In addition, operators of forklifts and excavators must be familiar with the specific machinery or equipment that they use and are competent in their safe operation.



**JAIME LIM**

for Commissioner for Workplace Safety and Health  
Occupational Safety and Health Division  
Ministry of Manpower

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<sup>1</sup> The course is offered at BCA Approved Training & Testing Centres.