

**PRELIMINARY INVESTIGATION  
FOR THE FORKLIFT INCIDENT  
WITH CIVILIAN VEHICLE  
ON 06 JAN 22 AT  
PASIR LABA AMMUNITION  
DEPOT (PLAD)**

**Prepared By: ME4 Low Zhi Chyim**  
**Appointment: Depot Comd PLAD, GSAB**  
**Contact Number: [REDACTED]**  
**Date: 06 Jan 22**

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COMMANDING OFFICER

07 JAN 22

**PRELIMINARY INVESTIGATION ON THE CIRCUMSTANCES  
LEADING TO THE FORKLIFT INCIDENT WITH CIVILIAN VEHICLE  
ON 06 JAN 22 AT PASIR LABA AMMUNITION DEPOT (PLAD)**

**INTRODUCTION**

1. A preliminary investigation was initiated by ME6 JOHNSON LING, CO GSAB, to investigate the forklift incident with civilian vehicle on **06 Jan 22** at Pasir Laba Ammunition Depot (PLAD).

**SUMMARY OF INCIDENT**

2. On **06 0930H Jan 22**, 6R2 IC, ME1 JASON KOH was tasked to load three pallets worth of Recoverable Ammunition Item (RAI<sup>1</sup>) ammunition boxes for inter-depot transfer to Paya Lebar Ammunition Depot (PYAD). Upon drawing of the Forklift key for MID 52157, ME1 JASON KOH conducted the Forklift Before-Operation-Checks (BOC) and parked his assigned Forklift at Block 22 (i.e. 6R2 R&I building) while awaiting the arrival of a 10-Ton Pek Tiong Choong (PTC) lorry.

3. On **06 1220H Jan 22**, the PTC lorry arrived and parked parallel to Block 22. ME1 JASON KOH proceeded to commence loading of the three pallets worth of RAIs ammunition boxes onto the PTC lorry.

4. On **06 1240H Jan 22**, as ME1 JASON KOH was manoeuvring the forklift to load pallet #3 (P3) of RAI ammunition boxes for placement onto the PTC lorry, he misjudged the turning radius as he was approaching the PTC lorry. As a result, the Forklift operated by ME1 JASON KOH knocked into a **Multi Mission Range Complex (MMRC) lorry's (GBJ 8874R) left passenger side door** which was parked stationary and perpendicular to block 22 as shown in **Figure 1**. ME1 JASON KOH had to manoeuvre to Left Hand Side (LHS) of the PTC to distribute the P3 load evenly as shown in **Figure 2**. The PTC lorry was positioned in an 'L' - shape with about 4m distance to the MMRC lorry. The dented area was caused by the wooden pallet. See **Figure 3** for pictures of dent damage to the MMRC lorry left-hand side passenger side door.

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<sup>1</sup> Empty ammunition boxes used for re-packing purposes (i.e. recycled from original OEM ammunition boxes to re-pack ammunition for fulfilment of SAF Training Units' ammunition indents and configuration of ops ammunition load.

Figure 1. Sketch Diagram of Forklift Incident at Block 22 (6R2) of PLAD

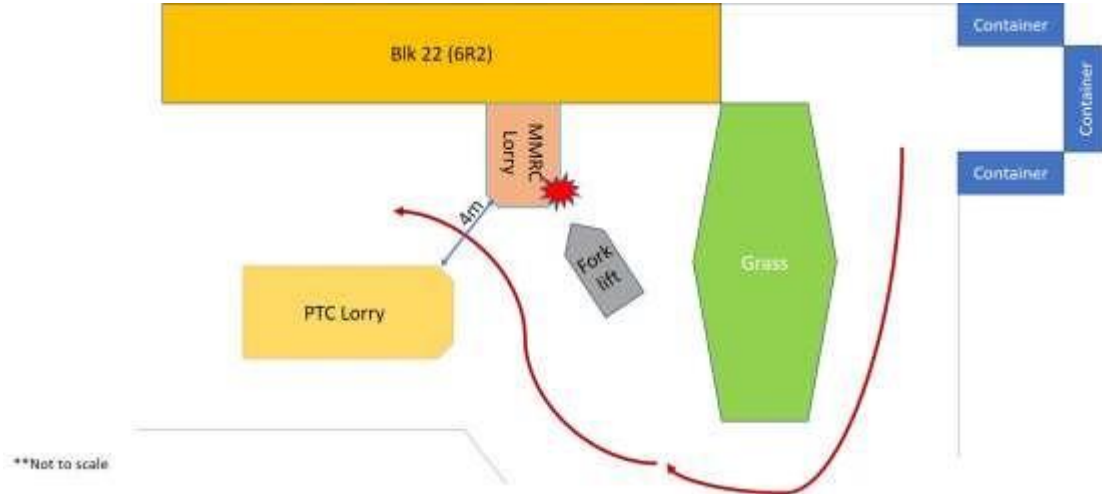


Figure 2. Placement Position of Pallet #3 (P3) on PTC Lorry

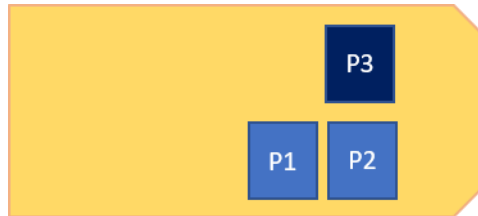


Figure 3. Dent Damage of MMRC's Lorry Left-Hand Side Passenger Side Door



5. On **06 1248H Jan 22**, GSAB DOO reported this Forklift incident involving civilian vehicle to GSOC.

### **INITIAL FACTS AND FINDINGS**

6. Based on the interviews with the involved personnel, the findings of the Investigation Officer are as follows:

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- a. **MAN** (Proficiency, Physiology, and Psychology). ME1 JASON KOH (CAT 'A' Operator) was well-versed and competent in performing the assigned forklift tasking. On 06 Dec 2021, he had completed a Forklift Operator currency refresher training. This currency refresher training was mandated as per stipulated in GSAB Procedure Manual 0502-03-00 titled 'Forklift Fleet Management'; para 14 (C) Refresher training is catered for Forklift Operator whom did not drive for more than 60 days. His last completed Forklifting task prior to this incident was **dated 23 Dec 2021**; hence **ME1 JASON KOH's competency to operate Forklift was current**. ME1 JASON KOH was also previously assigned as MHE IC<sup>2</sup> during his tenure in PYAD from 2018 to 2020. He also did not perform any Duty Team duty or DOS duty the day before and had sufficient rest to focus on assigned task. ME1 JASON KOH admitted that he had **made a judgemental error on the turning radius** during his manoeuvre approach to the PTC lorry. **There is no injury sustained to ME1 JASON KOH and MMRC staffs.**
- b. **MACHINE** (Ergonomics, Maintenance, and Serviceability). The Forklift was in serviceable (last PM was conducted on 14 Nov 21) condition and as part of safety protocol he had conducted the BOC to ascertain assigned Forklift was in good working condition before performing assigned forklifting task.
- c. **MEDIUM** (Weather, Terrain/ Environment and Facilities). The weather was sunny and operating terrain was dry at the point of operation. There was also ample working space in front of Block 22 (6R2) for vehicles to manoeuvre and park for loading and unloading purposes. Hence, the weather and terrain were not contributing factors to this incident.
- d. **MANAGEMENT** (Leadership, Support, Planning and Prep). The forklifting task was assigned and authorized by ME2 DAMIEN GOH, Storage IC of PLAD. As ME1 JASON KOH was a CAT 'A' experienced Forklift Operator plus the assigned forklifting task of three pallets worth of empty RAI ammunition boxes was assessed to be not of a complex task, he was allowed to operate Forklift without the need of a Ground Guide based on GSAB PM 05-02-03-00.

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<sup>2</sup> MHE IC is the SME in conducting Forklift Familiarisation and Currency Refresher trainings within the depot. He assists the Depot Commander to ensure Forklift Operators are trained and able to maintain high standards in operating forklifts.

- e. **MISSION (Compatibility and Complexity)**. The assigned mission is NOT a complex task nature, which was to fork three pallets of empty RAI ammunition boxes (i.e. no live ammunition load was involved) for inter-depot transfer to PYAD.

## **PRELIMINARY ASSESSMENT**

7. **Judgemental Error made by Forklift Operator**. Based on the initial facts and findings, the likely primary cause of this incident was due to ME1 JASON KOH's **judgemental error** where he **misjudged the turning radius during his manoeuvring approach to the PTC lorry**; so as to load pallet #3 (P3) of empty RAI ammunition box on the Left-hand side of PTC lorry. Prior to this incident, ME1 JASON KOH had sufficient rest and did not undertake DOS or Duty Team duties the day before 06 Jan 22. Hence, human fatigue was ruled out as one of the causal factor.

8. **Parking Position of PTC Lorry (see Figure 1) as Possible Contributing Factor**. As the PTC lorry was parked just 4m perpendicular to the MMRC lorry, it created a "limited driving space" for ME1 JASON KOH to drive through so as to place pallet #3 (P3) onto the left-hand side of PTC lorry (see **Figure 2**). Such hazard would have been eliminated should the PTC lorry had parked further apart from the MMRC lorry. That would create more working space for safe Forklift manoeuvring to perform such loading and unloading tasks.

## **RECOMMENDATIONS OF INVESTIGATING OFFICER**

9. **Demarcate Clear Parking Lots for Commercial Vehicles to Load General Stores**. Presently in PLAD, demarcated parking lots (i.e. "Yellow boxes" parking lots) at block 22 (6R2) were catered primarily only for military vehicles such as OUV and 5-Ton vehicles to load and unload live ammunition. As such, it is recommended that additional Parking Lots meant for commercial lorries to load and unload general stores be drawn-up; so as to design-out hazards due to limited working space for forklift manoeuvring.

10. **Immediate Sharing of Lessons Learnt from this Incident across All Forklift Operators in GSAB**. A safety sharing on this incident was conducted on 07 Jan 22 (Friday) for all GSAB ammunition depots and to review all forklift activities vis-à-vis competency and adequacy of supervision.

11. **Culpability**. ME1 JASON KOH is found culpable in this incident.

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12. Submitted for information, please.

<<Sent Via Email>>

ME4 LOW ZHI CHYIM

DEPOT COMMANDER PLAD

**COMMENTS AND RECOMMENDATIONS OF UNIT COMMANDER**

1. I concur with the investigation officer's findings and recommendations. GSAB has done her due diligence to ensure all Forklift Operators are current and will undergo a currency refresher training if their currency criteria are not met. This incident has been shared across GSAB immediately to educate all personnel on the key important lessons learnt and to ensure adequate operating space for all loading and unloading tasks.

<<Sent Via Email>>

ME6 JOHNSON LING

CO GSAB

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### Statement of ME1 Koh Wen Hao Jason

On 06 0930H Jan 22, I (ME1 Koh Wen Hao Jason SXXXX608I) was tasked to load RAI boxes to PTC (Peck Tiong Chun) vehicle for PYAD (Paya Lebar Ammunition Depot). Upon drawing the forklift, I did my BOC and went to 6R2 to park my forklift while waiting for the arrival of PYAD PTC vehicle.

At 06 1220H Jan 22, PYAD PTC vehicle arrival, I pause my work for 6R2 and go to load the RAI Boxes. I proceed to collect the RAI boxes of M2A1 on the extreme left side on block 22.

At 06 1240H Jan 22, on my third pallet I went to the container which was at extreme right side of block 22 to take the RAI boxes of M2 boxes. Upon going into the issue bay I accidentally knock onto the MMRC vehicle as I misjudge the turning radius and hit the passenger side of the vehicle. Where it was dented at the bottom left passenger door of the vehicle.

At 06 1242H Jan 22, I have reported it to my superior on the incident.

Jason  
Koh

Digitally signed  
by Jason Koh  
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