Factsheet: Israeli Forces' Misuse of Guided Bomb Units

Amid the ongoing conflict, the Israeli military has conducted offensive operations in the occupied Gaza Strip, Lebanon, and Yemen in which it has used U.S.-made weapons in attacks on civilians and civilian infrastructure, including attacks that human rights organizations have said should be investigated as war crimes. This factsheet focuses on the Israeli military's use of JDAMs and other GBUs since May 2023 and provides an overview of relevant U.S. weapons sales and transfers to the Israeli government during this period as well as incidents of civilian harm based on publicly available information from non-governmental organizations and media reporting. It is not intended to be exhaustive.

About JDAMs and other GBUs

US-made Joint Direct Attack Munitions (JDAM) have been used by the Israeli military for offensive operations in the occupied Gaza Strip and southern Lebanon since October 2023. The JDAM is a guidance kit that improves the accuracy of unguided, general-purpose bombs from fighter and bomber aircraft. JDAMS use either the 2,000-pound BLU-109/MK 84, the 1,000-pound BLU-110/MK 83 or the 500 pound BLU-111/MK 82 warheads. JDAMS are compatible with several models of fighter aircraft, including F-15E, F/A-18C/D/E/F, F-16C/D, F-35, and F-22 aircraft.

All JDAMs are guided bomb units (GBU), however, not all guided bomb units are JDAMs since there are several models and variations of GBUs. This includes the GBU-39 Small Diameter Bomb, ^{iv} GBU-12 Paveway, ^v and others. The JDAM variants that are used by F-16 planes are GBU-31 and GBU-38. JDAM kits attached to weapons are typically designated GBU-31, GBU-32, or GBU-38. ^{vi} Guided bomb units, including JDAMs, can typically be attached to bombs, aircraft, and other units. JDAMs are manufactured by The Boeing Company at the main production facility in St. Charles, Missouri. ^{vii}

Recent U.S. Sales and Transfers of JDAMs and other GBUs

Human rights organizations have documented unlawful attacks by Israeli forces amid the ongoing conflict and during past offensives, including in 2008-9, viii 2014, ix and 2021. This pattern has included the unlawful use of JDAMS and other GBUs. Despite the overwhelming evidence of a broad pattern of violations of international humanitarian and human rights law by the Israeli authorities, the Biden administration has continued to transfer and sell weapons to the Israeli government without sufficient oversight or vetting. This document provides examples of misuse of US-origin JDAMs and other GBUs from 2023 and 2024.

These transfers and sales have included JDAMs and GBUs. On August 9, 2024, it was reported that the State Department formally notified Congress of a direct sale of 6,500 JDAMs to Israel.xi On August 13, 2024, the State Department also notified Congress of approval of a possible sale of 50 F-15IA and 25 F-15I+ aircraft and related materials and equipment.xii Since October 7, 2023, the Biden administration facilitated the sale and transfer of large amounts of weapons, including

more than 10,000 2,000-pound bombs and thousands of Hellfire missiles. xiii These transfers have also included nearly 14,000 MK-84 2,000-pound bombs, 6,500 500-pound bombs, 3,000 Hellfire precision-guided air-to-ground missiles, 1,000 bunker-buster bombs, and 2,600 air-dropped small-diameter bombs. xiv

On May 8, 2024, Defense Secretary Lloyd Austin confirmed that the Biden administration had paused a shipment of bombs to Israel amid concerns over their potential use in Rafah in the occupied Gaza Strip.^{xv} However, two months later in July 2024, the Biden administration said that it would resume a shipment of 1,700 500-pound bombs that had been put on hold as part of a shipment of 1,800 2,000-pound bombs, which remain under review.^{xvi}

Misuse of Joint Direct Attack Munitions (JDAM) and other GBUs in the occupied Gaza Strip and Lebanon

1. May 9, 2023 - GBU-39 Small Diameter Bomb, Gaza City, occupied Gaza Strip

On May 9, 2023, at 2AM, Israeli forces launched a five-day offensive that began by launching air strikes targeting the al-Sha'af neighborhood in al-Shuja'iyah, Gaza City targeting the house of Khalil al-Bahtini, a senior commander of Al-Quds Brigades. Vii During the bombing, 10 civilians were killed and more than 20 were injured. Amnesty International's weapons experts analyzed photographs showing ammunition fragments that hit civilian infrastructure and identified the use of a GBU-39 Small Diameter Bomb manufactured by Boeing Defense, Space and Security. Viii Amnesty International found that the attack was likely a disproportionate attack that should be investigated as a war crime. Vix

2. May 12, 2023 - GBU-32/31 Bomb, Deir al-Balah, occupied Gaza Strip

On May 12, 2023, Israeli fighter jets attacked the neighborhood of al-Matayna in the Deir al-Balah area of central Gaza using what appeared to be a GBU-32/31 bomb based on Amnesty International's investigation.** The attack destroyed 23 residential buildings, including a two-story building housing two families and a medical facility in the area.** Approximately 10 civilians were living in one of the residential buildings in the attack.** Amnesty International determined that the attack did not meet the requirement to qualify as a military necessity that would have been proportionate to the magnitude of destruction caused.** Specifically, Amnesty International found there were no key military commanders or leaders of the Al-Quds Brigades near this attack, indicating no accurate military objective.**

3. May 13, 2023 – GBU-32/31, Jabalia refugee camp, occupied Gaza Strip

On May 13, 2023, Israeli fighter jets dropped what appeared to be a GBU-32/31 bomb on a four-story residential building belonging to the Nabhan family in Jabalia refugee camp located in the northern Gaza Strip. xxv The building was home to 42 people, five of them living with disabilities, including three wheelchair users. xxvi The residents were only given 15 minutes warning before the attack. xxvii This gave them insufficient time to carry out electric wheelchairs, which were destroyed

in the airstrike.xxviii Amnesty International visited the destroyed building and found no evidence that the house, or any other premises in the neighborhood, had been used to store weapons or other military equipment or to fire rockets.xxix No secondary explosions or conflagrations were reported following the air strike.xxx It is also extremely unlikely that the house had been used to command cyber or other operations that could have contributed to military operations.xxxi Amnesty International also found no evidence that the building was home to any Al-Quds Brigades military commander whose targeting would provide a definite military advantage.xxxiii The attack therefore appears to have been a direct attack on a civilian object and to constitute prohibited destruction of property and a likely a form of collective punishment.xxxiii

4. October 10, 2023 – JDAM, Deir al-Balah, occupied Gaza Strip

On October 10, 2023, at approximately 8:30pm, an Israeli airstrike hit the home of the al-Najjar family in Deir al-Balah killing 24 civilians. In total 21 members of the al-Najjar family were killed as well as three neighbors. Amnesty International's weapons experts determined that the bomb likely weighed at least 1,000 pounds and used a US-manufactured JDAM kit. The code stamped on the plates, 70P862352, are associated with JDAMs and Boeing. Additional codes indicated that the JDAM was manufactured in 2018. Amnesty International did not find any indication that there were any military objectives at the site of the strike or that the people in the buildings were military targets, raising concerns that this strike was a direct attack on civilians or on civilian objects and called for the attack to be investigated as a war crime.

5. October 19, 2023 – unidentified airstrike, Gaza City, occupied Gaza Strip

On October 19, 2023, an Israeli air strike destroyed a building in the compound of the Saint Porphyrius Greek Orthodox Church in the heart of Gaza's old city. *xxxix* An estimated 450 internally displaced members of Gaza's small Christian community were sheltering in the building. *xl* The strike killed 18 civilians and injured at least 12 others. *xli* Amnesty International determined that the strike was an indiscriminate attack or a direct attack on civilians or civilian objects and called for the attack to be investigated as a war crime. *xlii*

6. October 20, 2023 – unidentified airstrike, al-Nuseirat refugee camp, occupied Gaza Strip

On October 20, 2023, at around 2pm, an Israeli air strike destroyed the al-Aydi family home and severely damaged two neighboring houses in the al-Nuseirat refugee camp in the central Gaza Strip. In total, 28 civilians were killed. Their houses were in the area where the Israeli military had ordered residents of northern Gaza to move to. Amnesty International did not find any indication that there were any military objectives at the site of the two strikes or that the people in the buildings were military targets, raising concerns that these strikes were direct attacks on civilians or on civilian objects. Amnesty International did not find any indication that there were any military objectives at the site of the strike or that the people in the buildings were military targets, raising concerns that this strike was a direct attack on civilians or on civilian objects and called for the attack to be investigated as a war crime.

7. October 22, 2023 – JDAM, Deir al-Balah, occupied Gaza Strip

On October 22, 2023, an Israeli airstrike hit three houses belonging to three brothers of the Abu Mu'eileq family at approximately 12pm. xlvi In total, 18 members of the Mu'eileq family were killed – 12 children and six women – as well as their neighbor Rajab Ghazi Mezyed. xlvii Amnesty International's weapons experts determined that the bomb likely weighed 2,000 pounds and used a US-manufactured JDAM kit. xlviii The code stamped on the plates, 70P862352, are associated with JDAMs and Boeing. Additional codes indicated that the JDAM was manufactured in 2017. xlix Amnesty International found that this strike was either a direct attack on civilians or civilian objects or an indiscriminate attack and should be investigated as a war crime. 1

8. October 31 and November 1, 2023 – JDAM and unidentified airstrike, Jabalia refugee camp, occupied Gaza Strip

Israeli forces launched two airstrikes on the Jabalia refugee camp in the northern Gaza Strip on October 31 and November 1, 2023. Li At least 195 people were killed in the two airstrikes, with more than 700 wounded and 120 missing according to the Gaza government media office. Lii According to Reuters, a weapons expert said that the craters from the October 31 attack were consistent with JDAMs, specifically GBU-31 2000-pound bombs or GBU-32 1000 pound bombs. Liii

9. December 12, 2023 – unidentified airstrike, Rafah, occupied Gaza Strip

On December 12, 2023, at 3:02am, an Israeli strike directly hit two houses belonging to the Harb family in Al-Zuhour neighborhood killing 25 civilians and wounding at least 17 others. liv The strike completely destroyed the two houses and severely damaged three adjacent homes where some of the fatalities occurred. Witness testimony and photographic evidence collected from the scene indicate the houses were struck more than once, resulting in at least two craters. Ivi Amnesty International did not find any evidence that there were any military objectives in the area or that any of those present in the buildings at the time were legitimate military targets raising serious concerns that this was a direct attack on civilians and civilian objects and should be investigated as a war crime. Ivii

10. December 14, 2023 – unidentified airstrike, Rafah, occupied Gaza Strip

On December 14, 2023, an Israeli strike hit and destroyed a three-story residential building belonging to the Abdallah Shehada, a 69-year-old surgeon and former director of Abu Yousef Al-Najjar Hospital in the Brazil neighborhood. Viii A 69-year-old surgeon and former director of Abu Yousef Al-Najjar Hospital were killed in addition to at least 29 other civilians. Vat least 10 others were also injured in the attack. Amnesty International did not find any indication that a military target was present inside or in the vicinity of the house or that it was a military objective raising concerns that it was a direct attack on civilians and civilian objects and should be investigated as a war crime.

11. December 19, 2023 – unidentified airstrike, Rafah, occupied Gaza Strip

On December 19, 2023, an Israeli strike hit the two-story house of Omar Zu'rub in western Rafah. Liii The strike killed 22 civilians - 11 children, 7 men, 4 women and destroyed the house and adjacent residential buildings. Liiii Amnesty International confirmed the identity of at least 16 individuals who were injured, but scores more were likely wounded as one of the severely damaged houses sheltered up to 70 people. Liviv Amnesty International found no evidence that those residing in houses that were targeted by the strikes had any affiliation with armed groups, further indicating the lack of an evident military objective. Liviv Furthermore, two of the three attacks were carried out at night. Livii Amnesty concluded that this was a direct attack on civilians and civilian objects and must be investigated as a war crime. Livii

12. January 9, 2024 - GBU-39, Rafah, occupied Gaza Strip

On January 9, 2024, an Israeli strike hit the top two floors of the Nofal family five-story building located in the Tal Al-Sultan neighborhood just before 11pm. laviii Tal Al-Sultan is a neighborhood to which the Israeli military had repeatedly ordered displaced residents to flee. lavix The attack killed 18 civilians killed, including 10 children, 4 men, 4 women and injuring at least 8 others. lax Other homes collapsed under debris of destruction of the Nofal family's house. laxi Amnesty International's weapons experts investigated the attack, analyzing photos of fragments of ordnance from rubble and identified it as a GBU-39 Small Diameter Bomb (SDB), made in the US by Boeing. laxii Amnesty International found no indication of clear military objectives in the residential buildings that were targeted. Amnesty International determined that it was a likely direct attack on civilians and civilian objects or possibly an indiscriminate attack resulting from failing to take all feasible precautions to avoid killing or injuring civilians and should be investigated as a war crime. laxiii

13. March 27, 2024 - JDAM, Habbarieh, Lebanon

On March 27, in southern Lebanon an Israeli air strike targeted a residential building housing the Emergency and Relief Corps of the Lebanese Succour Association, an emergency and relief center. lxxiv The attack killed 7 volunteers at the center who were from the town of Habbarieh. lxxv Human Rights Watch (HRW) determined this to be an unlawful attack on civilians that failed to take all necessary precautions and added that if the attack on civilians was carried out intentionally or recklessly that it should be investigated as a war crime. lxxvi HRW reviewed photographs of weapon remnants from the site, and identified an MPR500 confirming it was a 500-pound class general purpose bomb made by Israeli Elbit Systems as well as the tailfin of a JDAM guidance kit, produced by the US-based Boeing company. lxxvii HRW found no evidence of a military target at the site. lxxviii

14. May 26, 2024 - GBU-39, Rafah, occupied Gaza Strip

On May 26, 2024, two Israeli air strikes on the Kuwaiti Peace Camp a makeshift camp for internally displaced people (IDP) in Tal al-Sultan in west Rafah, killed at least 36 people –

including six children – and injured more than 100. lxxix At least four of those killed were Palestinian fighters. lxxx The air strikes, which targeted two Hamas commanders staying amid displaced civilians, consisted of two US-made GBU-39 guided bombs. lxxxi The bombs contain an explosive charge of 17kg. lxxxii However, the total weight of each bomb is 113kg, capable of throwing metal fragments hundreds of meters. lxxxiii The use of these munitions, which project deadly fragments over a wide area, in a camp housing civilians in overcrowded temporary shelters likely constituted a disproportionate and indiscriminate attack and should be investigated as a war crime. lxxxiv

15. July 20, 2024 - GBU-39, Hodeidah, Yemen

On July 20, 2024, Israeli airstrikes hit Yemen's Hodeidah port. lxxxv The airstrikes killed at least six civilians and reportedly injured at least 80 others and hit more than two dozen oil storage tanks and two shipping cranes as well as a power plant in Hodeidah's Salif district. lxxxvi HRW determined that this amounted to an apparently unlawful indiscriminate or disproportionate attack on civilians that could have a long-term impact on millions of Yemenis who rely on the port for food and humanitarian aid, a possible war crime. lxxxvii Photos of a remnant that Mwatana for Human Rights collected at the site was analyzed by HRW, which bore the markings of Woodward, a U.S. manufacturing company, and matches remnants collected in other contexts of the GBU-39 series small diameter bomb made by the U.S. company Boeing. lxxxviii

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