



WORLD**BEYOND**WAR.org

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**Involvement of Canadian Weapons
Manufacturers in Commission of International
Crimes Connected to Israel's Occupation,
Apartheid, Siege, and Genocide in the Occupied
Palestinian Territories**

*Submission to the report of the Special Rapporteur on the occupied
Palestinian territory to the Human Rights Council 58th session.*

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Background:

The International Court of Justice in their provisional ruling on January 26, 2024 found it plausible that Palestinians' rights under the Genocide Convention were being violated by Israel, and instructed all State parties to uphold their legal obligations to act to prevent genocide. Despite the passage of 10 months, companies in Canada are continuing to send weapons, weapon components, and military equipment to Israel.

While the Government of Canada does not directly provide weapons or military components to Israel, it is responsible for authorizing and overseeing the sale and export of such goods made by Canadian companies. The export of weapons from Canada to Israel takes place via two primary pathways.

The first pathway involves direct transfers to Israel. This requires export permits issued by Global Affairs Canada and overseen by the Minister of Foreign Affairs, Minister Mélanie Joly.

The second pathway is export of arms from Canada to Israel indirectly, via the United States. Due to existing agreements between Canada and the United States, no export permits are required for the vast majority of Canadian weapon exports to the United States. Further, Canada does not apply any restrictions or controls to most military exports to the US and little is known about what happens to these exports after they leave Canada. Thus, these exports effectively employ a major loophole in the Canadian Government's arms trade policy that allows the majority of Canada's arms exports to Israel to pass — largely unregulated and untracked — through the US. The US provides Israel with 70% of their weapons imports making it a vital partner in the crimes being committed in the occupied Palestinian territories. Notably, there are some components that are critical to Israel's assaults on Palestine and other countries that have been confirmed to be manufactured only in Canada. For example, a recent investigation revealed that a Canadian company, Gastops, is the sole supplier of a critical engine sensor in F-35 warplanes being used in the devastating bombing campaigns in Gaza. Further details about Gastops will be discussed later in this submission.

In August 2024, it was revealed by fluke that a Canadian contractor, General Dynamics Ordnance and Tactical Systems Inc., was contracted by the US to fill a possible order of \$61 million USD in high explosive mortar cartridges that would be sent to Israel. Only following substantial public backlash and outcry, Minister Joly stated that the government was "in contact with General Dynamics" and was forced to block the planned shipment. However no action has been taken to address the hundreds of other contracts and planned shipments that would see Canadian-made military goods be shipped to the US en route to Israel.

Despite Canada's legal obligations, there is a continued flow of military equipment, weapons and weapon components to Israel. In fact, over the first two months of Israel's deadly assaults on Gaza, the Canadian government authorized a record breaking \$28.5 million in new arms export permits to Israel. The Government of Canada has actively obscured the truth and misled the public about these transfers. Canadian government officials and ministers initially falsely claimed that Canada does not send weapons to Israel, hiding behind government-created language of "lethal" vs. "non-lethal" military exports, asserting that the military exports from Canada to Israel are "non-lethal". The military exports to Israel remain intentionally shrouded in secrecy, with little publicly available information. Global Affairs Canada's own data, however,

indicates that in 2023, over \$10 million worth of exports were used by Israeli companies in “Bombs, torpedoes, rockets, missiles, other explosive devices and charges and related equipment and accessories, and specially designed components therefor”; and over \$4 million worth were used in “Aircraft”, “lighter-than-air vehicles”, “unmanned aerial vehicles” (“UAVs”), aero-engines and “aircraft” equipment, related equipment, and components, specially designed or modified for military use.”

On 18 March, 2024, a non-binding motion was passed in Parliament stating that Canada would “cease the further authorization and transfer of arms exports to Israel to ensure compliance with Canada’s arms export regime”. In September 2024, Foreign Affairs Minister Mélanie Joly told journalists, “We will not have any form of arms or parts of arms be sent to Gaza, period. How they’re being sent and where they’re being sent is irrelevant.” However, activist groups have since discerned that Canada has only suspended approximately 12% of the over 200 permits that have already been issued, and has made no apparent steps to curb the flow of military goods from Canada to Israel via the US.

As of November 2024, the broad multi-sector Arms Embargo Now campaign, bringing together hundreds of union, faith organizations, civil society and human rights bodies, and hundreds of institutions and grassroots groups across Canada, has summarized the status of Canada’s actions towards an arms embargo on Israel as follows.

Actions the Canadian government has undertaken:	Actions the Canadian government has not yet done:
Paused issuing any <i>new</i> permits for weapons exports to Israel.	They haven’t suspended or cancelled approximately 88% of the permits currently being used to ship arms to Israel.
Suspended 30 (or roughly 12%) of the 200+ permits that had already been issued. These active permits are for military goods that are continuing to be shipped out to Israel right now.	They haven’t done anything to stop the vast majority of arms exports to Israel which don’t need an export permit because they use a loophole that allows military goods to go to Israel via the U.S., unreported & unregulated.
Promised to stop one planned shipment of Canadian-made explosives to Israel through the US. But only after details of this one shipment (among hundreds) were revealed by fluke and provoked huge public outcry.	They haven’t stopped importing weapons from Israel. Canada continues to fund the Israeli war machine by purchasing Israeli weapons for the Canadian military marketed as “battle-tested” on Palestinians.

Over the last year, there has been a significant mobilizing of civil society across the country urging the Government of Canada to follow international law and stop allowing Canadian-made military equipment and technology to get to Israel through direct or indirect transfers. Legal avenues have also been pursued. On 5 March, 2024, a group of Canadian and Palestinian applicants filed legal proceedings in federal court requesting a court order insisting that the Government of Canada “cease issuing export permits for all military goods and technology destined for Israel”. It is argued that Canadian companies’ continued export of military goods

violate domestic laws such as the *Export and Import Permits Act* and the *Canadian Charter of Rights and Freedoms*.

On 6 November, 2024 a lawsuit was filed by two Palestinian-Canadian plaintiffs and legal advocates at the Ontario Superior Court of Justice against the Attorney General of Canada "alleging Canada's failure to act to prevent genocide is a violation of its legal obligations under the Genocide Convention (1984) and of the plaintiffs' rights under the Canadian Charter of Rights and Freedoms".

The issues of secrecy and possible non-compliance with international law was also raised by the Committee on the Elimination of Discrimination Against Women (CEDAW) in their 10th periodic report of Canada, issued on 16, October 2024. Here the committee stated that there is "insufficient information on policies and regulations preventing direct or indirect arms transfers by the State party or by private companies under its jurisdiction to third countries, including Israel, for use in conflict zones where they may facilitate violations of women's and girls' human rights as well as of international humanitarian law, notably in Gaza" (13d). Among the recommendations, the committee stated they were "Appealing to the leadership of the State party in the implementation of Security Council resolution 1325 (2000) and subsequent resolutions on women and peace and security and its international obligations under the Convention and under the Arms Trade Treaty, which sets forth as its purposes the reduction of human suffering and the promotion of cooperation, transparency and responsible action by States in the international trade in conventional arms, enhance its transparency and accountability mechanisms regarding the direct and indirect transfers and export of arms, including parts and components thereof, to third countries, whether by the State party itself or by companies registered or domiciled within its territory, and develop a mechanism to conduct comprehensive and transparent assessments of the impact of such transfers on the human rights of women and girls living in conflict zones, in line with its feminist foreign policy" (14c).

This submission will further examine some specific companies in more detail, illustrating both direct and indirect military transfers from Canada to Israel. Due to intentional secrecy and the lack of tracking and permit requirements, identifying these exports is challenging. There is ample evidence showing that many companies are exporting to the US for inclusion in weapons programs that supply Israel. There are many Canadian companies whose parts are integrated into weapons systems used by Israel, and are therefore very likely indirectly supplying Israel. A non-exhaustive list of these companies can be found in our live document, which is being updated on a rolling basis.

Canadian Companies Exporting Directly to Israel

These companies are a small sampling of companies that have at least one Canadian location or subsidiary known to be exporting or supplying weapons systems directly to Israel. The five companies listed here are amongst those who have asked to participate in the lawsuit that was filed in federal court requesting a court order to cease arms exports from Canada to Israel. Additional companies are listed in our live document.

Apollo Microwaves Ltd

Apollo Microwaves LTD. is a Canadian company located in Dorval, Québec. The company manufactures standard and custom-engineered microwave components, subsystems and products that can be used in military communications and radar systems. Their applications range from 1-67 GHz.

Apollo is believed to have or to have had active permits for export of military goods to Israel after Oct. 9, 2023 because the Government of Canada has named it as a company with an interest in the lawsuit challenging arms exports to Israel. It lists a distributor in Tel Aviv on its website.

Excelitas

Excelitas is a company headquartered in Pittsburgh, PA with a Canadian subsidiary: Excelitas Canada Inc, with four locations, 2 in Quebec and 2 in Ontario. They are involved in the design, development and manufacture of photonic technologies with military and civilian applications. The military applications of its photonic technologies include Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR), avionics, helmet-mounted and Head Up Displays (HUD), missiles and missile defense, and "soldier systems" (including night vision goggles and related equipment.)

They are or have been holders of valid permits to export military goods to Israel as recently as 2023. They have identified themselves as such in the context of the lawsuit filed in federal court, and the legal team involved has asked that the company be named as a respondent.

Excelitas does appear to have a distributor for its defense and aerospace sensors and lasers in Tel Aviv: Tech NiKo Ltd, as well as for its defense optronics: Prolog Optics

GeoSpectrum Technologies

GeoSpectrum is a subsidiary of Elbit, Israel's biggest military and arms company. Elbit has a close relationship with Israeli security forces, which it supplies with a wide range of weapons systems and technology.

Located in Dartmouth, Nova Scotia, Geospectrum Technologies specializes in underwater acoustic transducers and systems. They also make surveillance software with military uses.

In July 2024, GTI identified itself as the holder of at least two export permits for military goods to Israel in the context of one of the arms exports lawsuits against the government of Canada. The company argues that their water based sonars are non-lethal and not "instruments of war", asking to be removed from the lawsuit.

One of the permits was for a towed sonar system that was exported for demonstration and was to be returned to a Canadian defense company. The second has not yet been matched to a specific kind of military equipment or technology.

Pratt & Whitney Canada Corp

Pratt & Whitney Canada (P&WC) is the Canadian arm of Pratt & Whitney, a subsidiary of RTX (formerly Raytheon Technologies). It is headquartered in Longueuil, Quebec.

Pratt & Whitney has profited from a decades-long relationship with Israel's Ministry of Defense. Its public relations materials boast that the Israeli Air Force has flown planes powered by Pratt & Whitney engines since 1947 – the year before the state of Israel was established.

The Israeli Air Force currently operates Pratt & Whitney F100-powered F-15 & F-16 fighters, and Pratt & Whitney PT6-powered trainers. Pratt & Whitney currently has a 15-year contract with Israel's Ministry of Defense to service the entire fleet of IAF F-15s and F-16s – the latter being the IAF's most important fighter jet. The contract ends in 2031. Both the F-15s and F-16s are being used by the Israeli Air Force to carry out its deadly bombing campaign of Gaza.

Pratt & Whitney Canada manufactures the PT6A turboprop engines used in Israel Aerospace Industries' Heron TP (Eitan) drones. These combat drones can be armed and used to carry out airstrikes, surveillance, intelligence gathering and target acquisition. The Israeli military has deployed them in past wars on Gaza as well as the current offensive.

P&W Canada avoids scrutiny for the export of its PT6A turboprop engines because they are classified as dual-use goods and as such their export is not subject to regulation under Canada's arms control regime and does not require permits. On its website, the PT6A is described as a "general aviation engine." Project Ploughshares has published a helpful discussion of this as well as a second loophole employed by the company – through which P&WC can export PT6A engines modified for military use by designating the manufacturer of the aircraft they're intended for as the end-user, instead of the ultimate military recipient which is the true end-user.

In this case, because IAI manufactures the Heron (Eitan) drones, it seems more likely that the first loophole is used. Nonetheless, we know that since October 9, 2023, Pratt & Whitney Canada has had active permits to export military goods to Israel on account of being involved in the federal lawsuit against the Government of Canada.

TTM Technologies Inc. (formerly Viasystems Toronto Inc.)

TTM Technologies is a US-headquartered company that bills itself as one of the top five global manufacturers of printed circuit boards (PCBs) as well as a leading producer of "engineered systems, radio frequency ("RF") components and RF microwave/microelectronic assemblies." It has a Canadian location in Toronto and in 2023 appears to have registered a subsidiary, TTM Technologies Tel Aviv Ltd, in Israel.

On a global scale, TTM Technologies supplies some of the world's biggest weapons manufacturers such as Lockheed Martin (including the F-35 program) and L3 Harris.

TTM Technologies' Toronto location has a history of exporting bare printed circuit boards (BPCBs) to Israel. In 2018, TTM Technologies' subsidiary Viasystems Toronto, now TTM

Technologies Toronto, applied for licenses to export BPCBs to various branches of the Israeli military and Elbit Systems, as well as to an Elbit intermediary in Israel, Artem Technologies Ltd. The circuit boards were destined to be used in displays for F-15 fighter jets, communications computers for F-16 fighter jets, and in the power distribution system of Elbit's Lizard laser guidance kits which turn general purpose bombs into precision strike munitions. The circuit boards were also slated for use in rocket, radio communications and thermal imaging systems.

Between July 2022 and December 2024, GAC authorized the export to Israel of up to \$104,100,070.78 in BPCBs. By July 2024, circuit boards worth \$11,248,582.96 had been exported. While it is not confirmed that TTM products account for all of Canada's exports of BPCBs to Israel in this period, it is known that TTM possessed valid export permits after October 7, 2023 on account of identifying themselves as a recipient of export permits to Israel in the context of the lawsuit against the Government of Canada.

Canadian Companies Exporting Indirectly to Israel via the United States

The three companies highlighted below are involved in producing parts for the F-35 fighter jet, illustrating how parts produced in Canada form essential components of military equipment being used in Israel's assaults on Gaza. The F-35 is one example of a weapons system produced in the US with parts manufactured in Canada. The IDF currently owns 50 F-35s, and they have signed a deal with the US to buy 25 more.

F35s are a key tool of Israel's destruction and violence in Gaza. Israeli officials have stated that the F-35Is have been equipped with 2,000-lb bombs and confirmed their use in the ongoing bombardment of Gaza. Various media sources – including articles in Defense News, The Eurasian Times, the Middle East Monitor, and The Guardian – all corroborate the F-35I's use in Gaza, amid the most destructive bombing campaign in recent history.

More than 100 Canadian companies supply components to the F-35, which is assembled in Texas by Lockheed Martin. The number of Canadian-made components in an individual F-35 aircraft depends upon the variant and the date of production. However, according to industry representatives and Canadian officials, all F-35s produced include Canadian-made parts and components. A 2018 study stated that "there is \$2.3 million USD [approximately C\$3.1-million] worth of Canadian components on every F-35 jet manufactured."

The unique version of the F-35 used by the Israeli military are called F35Is. The F35I is a slightly altered F35A. The alterations include adding certain Israeli-made equipment; since the modifications involve adding capabilities on top of the existing infrastructure, it is unlikely to affect the Canadian-made technology within each aircraft.

All the Canadian companies listed here, and many more, are found in our live document.

ASCO Aerospace Canada Ltd.

ASCO Aerospace is a Canadian aerospace company located in Delta, BC. They manufacture the F-35 bulkhead, the "fighter's single largest part". As of 2022, ASCO Aerospace Canada had produced 600 of these bulkheads for the F35 program. An article by Lockheed Martin in 2022 stated that there were 750 F35s in existence. Given these proportions, it seems that while ASCO may not be a sole source supplier for the F-35, they are certainly a majority supplier of the bulkheads.

Gastops

Gastops is a Canadian company with offices in Ottawa, ON, Dartmouth, NS and Mount Pearl, NL. Gastops produces engine sensors, which detect engine wear. Their MetalSCAN oil debris sensor is in every F-35 engine and they are the sole supplier of this part, meaning that they are the only company in the world that produces this specific engine sensor. Their status as a sole supplier has been confirmed by journalistic investigation, is mentioned in Gastops sales documents, and further confirmed on Lockheed Martin Canada's X (formerly Twitter) account where they state "Checkout the critical tech that our Canadian partners at @gastops provide for every single @theF35 produced globally".

Gastops supplies their sensors to Pratt & Whitney. Pratt & Whitney then fits them into the F-35 engines, then supplying these engines to Lockheed Martin. While it seems likely that these F-35 engines are produced by Pratt & Whitney's Canadian subsidiary in their Canadian locations, we have no direct evidence to support this, and these engines may be produced solely by their US locations. This draws attention once again to the lack of transparency in this supply chain. However, given Gastops' status as a sole supplier, we can say with confidence that their engine sensors, a Canadian-made part, are in every one of Israel's F35ls – and have therefore directly aided the Israeli genocide in Gaza.

Héroux-Devtek

Héroux-Devtek is a Canadian aerospace company that specializes in the design, development and manufacture of landing gear, actuation systems and components. Headquartered in Longueuil, Quebec, it has facilities in the Greater Montreal area, Kitchener, Cambridge and Toronto, Ontario; as well as in the US, the UK, and Spain. Héroux-Devtek exports components to the US that are used in various weapons systems. Subawards from the U.S. Department of Defense to Héroux-Devtek for these programs can be browsed on USASpending.gov.

Héroux-Devtek has various subaward contracts to produce parts for the F-35 program, namely wing bulkheads and wing structural components. Further, a 2013 article notes that "Héroux Devtek also designed, qualified and now produces all the uplocks for the main and nose landing gear doors" in every F35. Héroux-Devtek also holds a patent for "uplock release assembly" for the landing gears. The use of the word "qualified," and "produces all" in the article, combined with the information of their patent, strongly suggests that Héroux-Devtek holds a patent and is a sole source supplier of this part to the F-35 assembly. It is therefore highly likely that this Canadian-made part is in every one of Israel's F-35ls.

In this same article, it is also stated that Heroux-Devtek is contracted by Honeywell Aerospace to assemble aluminum boxes for their complex Power Thermal Management System, which is a system installed on all F-35 variants.

Héroux-Devtek is also part of other weapons systems supply chains which likely involve indirect export to Israel. The company manufactures the landing gear for the Sikorsky CH-53K King Stallion, a transport helicopter used by the Israeli air force. The Israeli military uses 22 CH-53Ks and has at least 12 more on order with Sikorsky, a subsidiary of Lockheed Martin. These helicopters are used for troop and cargo transport, search and rescue, and to “support Israeli special operations programs.” Héroux-Devtek also provides landing gear for Boeing’s F-15 fighter jet. The company has provided landing gear for Lockheed Martin’s F-16 program. These two fighter jets (F-15 and F-16) are used by the Israeli military extensively in its ongoing offensive on Gaza and Israel is seeking to procure 50 more F-15 fighter jets.

Conclusion:

Despite Canadian government promises that “we will not have any form of arms or parts of arms be sent to Gaza, period” as of the time of publication Canadian companies continue to provide critical components to Israel’s military arsenal, including the principal weapons systems used in its ongoing attacks on Gaza – under an intentional shroud of secrecy. In the face of legal challenges and the mobilization of Canadian civil society calling for an end to these practices, while a pause on approval of future arms permits has been instituted, only roughly 12% of active weapons export permits directly to Israel have been suspended. Additionally, Canadian weapons and military equipment continues to flow unregulated and untracked to Israel through the US, destined to be used by the Israeli military to continue the unabated human rights violations and genocide being perpetrated against Palestinians in Gaza. This must end.