

ATP 3.3.4.2(C)

STANDARDS RELATED DOCUMENT

NATIONAL SRD – CANADA



June 2017

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Transport and Rescue Standards Evaluation Team (TRSET)**

Canada 

TABLE OF CONTENTS

NATIONAL SRD - CANADA 1

1. Introduction..... 1

2. Tanker Aircraft Type..... 1

3. National AAR Clearance Process 1

4. AAR Crew Qualification and Currency..... 1

5. AAR POCs 1

6. National SRD Last Updated..... 3

7. SIMULTANEOUS EMPLOYMENT MATRIX FOR AAR PLATFORMS..... 4

8. National Reservations 4

ANNEX A TO NATIONAL SRD – CANADAA-1

CC130T A-1

 CC130T Information..... A-1

APPENDIX A1 – ANNEX A TO NATIONAL SRD – CANADAA1-1

CC130T DIMENSIONS A1-1

APPENDIX A2 – ANNEX A TO NATIONAL SRD – CANADAA2-1

CC130T – REFUELING RANGE LIMITS AND HOSE MARKINGS..... A2-1

APPENDIX A3 – ANNEX A TO NATIONAL SRD – CANADAA3-1

CC130T – DROGUE..... A3-1

APPENDIX A4 - ANNEX A TO NATIONAL SRD – CANADAA4-1

CC130T – LIGHTING A4-1

ANNEX B TO NATIONAL SRD – CANADAB-1

CC150T B-1

 CC150T Information..... B-1

APPENDIX B1 - ANNEX B TO NATIONAL SRD – CANADAB1-1

CC150T WING-MOUNTED PODS..... B1-1

ANNEX C TO NATIONAL SRD - CANADAC-1

RECEIVER DATA/CLEARANCE C-1

APPENDIX C1 – ANNEX C TO NATIONAL SRD – CANADAC1-1

CANADA TANKERS TO FOREIGN MILITARY RECEIVERS OPERATIONAL CLEARANCE AND TECHNICAL COMPATIBILITY..... C1-1

APPENDIX C2 – ANNEX C TO NATIONAL SRD – CANADAC2-1

CANADA RECEIVERS TO FOREIGN MILITARY AND NON MILITARY TANKERS CLEARANCE AND TECHNICAL COMPATIBILITY..... C2-1

APPENDIX C3 – ANNEX C TO NATIONAL SRD – CANADAC3-1

RECEIVERS AAR INFORMATION ON CANADIAN TANKERS C3-1

APPENDIX C4 – ANNEX C TO NATIONAL SRD – CANADAC4-1

COMMON WARNINGS, CAUTIONS AND NOTES..... C4-1

APPENDIX C5 – ANNEX C TO NATIONAL SRD – CANADAC5-1

RECEIVER SPECIFIC AAR INFORMATION C5-1

TABLE OF FIGURES

Figure A1-1 CC130T DimensionsA1-1

Figure A2-1 CC130T Range Limits and Hose MarkingsA2-1

Figure A3-1 CC130T Drogue.....A3-1

Figure A4-1 CC130T Lighting.....A4-1

Figure B1-1 CC150T Hose markingsB1-1

Figure B1-2. CC150T DrogueB1-2

Figure B1-3 CC150T Pod and lightsB1-3

Figure C1-1 CANADA Receivers/Foreign Military Operational Clearance and Technical Compatibility Matrix C1-1

Figure C2-1 CANADA Receivers/Foreign Military and Non Military Tankers Clearance and Technical Compatibility Matrix C2-1

Figure C3-1 AAR Mission Planning Data (CC130T) C3-1

Figure C3-2 AAR Mission Planning Data (CC150T). C3-1

NATIONAL SRD - CANADA

1. **Introduction.** The Royal Canadian Air Force (RCAF) has two fleets of tankers, the CC130T Hercules flown by 435 Sqn based in Winnipeg MB and the CC150T (A310) Polaris, flown by 437 Sqn based in Trenton ON. The RCAF only one receiver type, the CF 18 A/B, flown out of Cold Lake AB and Bagotville PQ. All RCAF tanker and receiver crews are trained in ATP 3.3.4.2 procedures and are compliant.

2. **Tanker Aircraft Type.**
 - a. **CC130T** – See [Annex A](#)
 - b. **CC150T** – See [Annex B](#)

3. **National AAR Clearance Process.** Canada does not fully adhere to NATO AAR SRD 1 regarding awarding categories, as legal and financial considerations are considered beyond the scope of this SRD, thus foreign receivers and tankers are assessed for technical and operational compatibility only and listed accordingly within this SRD. Op/Ex planners can plan for RCAF assets to conduct AAR during the operation/exercise planning, but must address legal and financial considerations during the planning process for the specific operation or exercise. Foreign nations that wish to conduct AAR operations with RCAF aircraft must obtain an AAR operational flight release through the RCAF Operational Airworthiness Authority, Comd 1 Cdn Air Div (paragraph 5a for POC details). If an Aircraft/Receiver combination is not shown in either the Matrix located in Figure C1-1 of this National SRD – Canada, then there must be a current and specific Air-to-Air Refueling Clearance Letter or Specific Purpose Flight Permit (SPFP) that otherwise authorizes AAR in that combination.

4. **AAR Crew Qualification and Currency.** RCAF crews comply with ATP 3.3.4.2 AAR-SRD 2, with the exception that, while trained to operate at night, RCAF crews do not maintain night AAR as a currency. Other Nation’s crews shall be qualified and current in accordance with ATP 3.3.4.2 AAR-SRD 2 on their applicable AAR system prior to conducting AAR Operations with RCAF assets.

5. **AAR POCs.**
 - a. **POC for National SRD & Tanker/Receiver Clearances.**
 Mail to:
 Staff Officer Air Mobility Coord
 1 Canadian Air Division HQ
 PO Box 17000 Stn Forces
 Winnipeg, MB
 Canada R3J 3Y5

Email: [+RCAF AAR Clearances@1 Cdn Air Div @Winnipeg](mailto:+RCAF_AAR_Clearances@1_Cdn_Air_Div_@Winnipeg)
Tel: (+1) 204 833 2500 Ext 6535
Fax: (+1) 204 833 2560
CSN 257 6535

b. **POC for AAR Sqns.**

1). 435 (T &R) Sqn AAR Ops O (CC-130T-Hercules)

Mail to:
435 (T &R) Sqn, AAR Ops O
PO Box 17000 Stn Forces
Winnipeg, MB
Canada R3J 3Y5
Email: 435OPS@forces.gc.ca
Tel: (+1) 204 833 2500 ext 2358 or 5036
CSN: 257 2358 or 257 5036

2). 437 (T) Sqn SAARO (CC150T-Airbus)

Mail to:
437 (T) Sqn, SAARO
PO Box 1000 Stn Forces
Astra, ON
Canada K0K 3W0
Email: 437OPS@forces.gc.ca
Tel: (+1) 613 392 2811 ext 7592
CSN: 827 7592

c. **POC for STAN/EVAL.** The initial point of contact for all international AAR and STAN/EVAL matters:

RCAF Chief AAR STAN/EVAL
Transport and Rescue Standards Evaluation Team
123 Yukon St Bldg 23
P.O. Box 1000 Stn Forces
Astra, ON
Canada K0K 3W0
Email: TRSETOR@intern.mil.ca
Tel: (+1) 613 392 2811 ext 3035

d. **Tech Clearance POC**

CC130T: Primary Air Vehicle and Ops
Email: CC130WSM_Inbox@Forces.gc.ca

CC150T: System Engineering Support
Email: CC150WSM@forces.gc.ca

Mail to respective positions:
455 Boulevard de la Carriere
9-NA40 Gatineau, QC
Canada J8Y 6V7

6. National SRD Last Updated. June 2017

7. **SIMULTANEOUS EMPLOYMENT MATRIX FOR AAR PLATFORMS**

(Including Air Transport, Air-to-Air Refueling and Aeromedical evacuation only. Excluding ISR, C², EW, SOF and any weaponization).

	NATIONAL				MULTI-NATIONAL											
	Simultaneous AAR whilst carrying Passengers (Pax)	Simultaneous AAR whilst carrying Cargo	Simultaneous AAR whilst carrying Dangerous Goods (DG) Cargo	Simultaneous AAR whilst carrying Aeromedical Evacuation (AE)	Simultaneous AAR whilst carrying other nation's Pax	Simultaneous AAR whilst carrying other nation's Cargo	Simultaneous AAR whilst carrying other nation's DG Cargo	Simultaneous AAR whilst carrying other nation's AE	Simultaneous AAR of other nation's receivers whilst carrying your nation's Pax	Simultaneous AAR of other nation's receivers whilst carrying your nation's Cargo	Simultaneous AAR of other nation's receivers whilst carrying your nation's DG Cargo	Simultaneous AAR of other nation's receivers whilst carrying your nation's AE	Simultaneous AAR of other nation's receivers whilst carrying other nation's Pax	Simultaneous AAR of other nation's receivers whilst carrying other nation's Cargo	Simultaneous AAR of other nation's receivers whilst carrying other nation's DG Cargo	Simultaneous AAR of other nation's receivers whilst carrying other nation's AE
(future) Tanker capability	X	X	X		X	X			X	X	X		X	X		

Notes: 1. Carriage of any cargo or passengers may significantly reduce Max off-load.

2. Duty passengers only.

8. **National Reservations.** Presently, Canada does not state a night and day qualification/currency for tanker crews.

LIST OF EFFECTIVE PAGES TO NATIONAL SRD-Canada

PAGE NUMBERS	EFFECTIVE PAGES
1 to 4 LEP-1	Jun 17 Jun 17

ANNEX A TO NATIONAL SRD – CANADA

CC130T

CC130T Information

1. **AAR Equipment.** There are 2 removable under-wing pods located halfway between each wing-tip and the outboard engine. The FRL Mk32B-751 incorporates an MA3 coupling and a soft drogue. The refueling hose is 23.7 m (78 ft) in length. To attain fuel flow, the hose should be pushed in at least 1.4 m (5 ft), which is marked by the first orange band on the hose. Beyond this orange band are 3 white bands at 1.4 m (4.5 ft) intervals and a second orange band. Fuel will flow when the hose is positioned between these 2 orange bands (a distance of 20 ft). Beyond the second orange band are 4 white bands at 3 m (10 ft) intervals.
2. **Refueling Altitude/Level and Speeds.** The AAR height band is 1,000 ft to 25,000 ft and the speed range is 200 to 250 KIAS.
3. **Maximum Transferable Fuel.** Maximum fuel load is 25,700 kg (57,520 lb). Transferable fuel is dependent on sortie duration but an offload of 20,140 kg (45,000 lb) is available for a 2 hr flight, assuming a fuel burn rate of 2,270 kg/hr (5,000 lb/hr) including diversion reserves. In overweight conditions, maximum fuel load is 36,400 kg (81,520 lb).
4. **AAR Fuel transfer rate.** Transfer rate is 450 - 900 kg/min (1,000 – 2,000 lb/min).
5. **Regulated Fuel Pressure.** Fuel pressure at the drogue is regulated to 50 psi (+/- 5 psi).
6. **Fuel Types Available for AAR:**
 - a. F- 34
 - b. F-37, F-40, F-24, F- 27
7. **Lighting.**
 - a. **Exterior Lighting.** The CC130T is equipped with exterior IR lighting which may interfere with NVG operations. The aircraft is not NVG compliant.
 - b. **AAR Equipment Signal Lighting.** Six AAR advisory lights are located below the pod aft fairing. They are arranged in a horizontal row and are colored from left to right: amber, red and green. See [Appendix A4](#). The lights signal the following:

Steady Red

Pod malfunction - do not make contact. (If already in contact, disconnect until malfunction cleared)

+Flashing Red+	Breakaway
Steady Amber	Ready for contact
+Flashing Amber+	Fuel flow stops. Hose pushed in too far
+Flashing Amber+	Fuel still flowing. Hose at forward end of refueling range (with Steady Green)
Steady Green	Fuel flowing
+Flashing Green+	Receiver fuel tanks full

When conducting night AAR operations, the hose markings near the pod aft fairing will be illuminated by a white light located in the aft fairing, when the AAR advisory lights are dimmed. The drogue canopy is fitted with luminous reflecting beta lights. A variable intensity pod and hose illumination light is located on the leading edge tip of the horizontal stabilizer. To assist in night formation, 3 strip lights are located on each side of the aircraft as follows:

Wing-tip	Aft of the navigation light
Fuselage	Aft of the paratroop door
Horizontal Stabilizer	Underside of the stabilizer orientated from the stabilizer tip inward to the fuselage

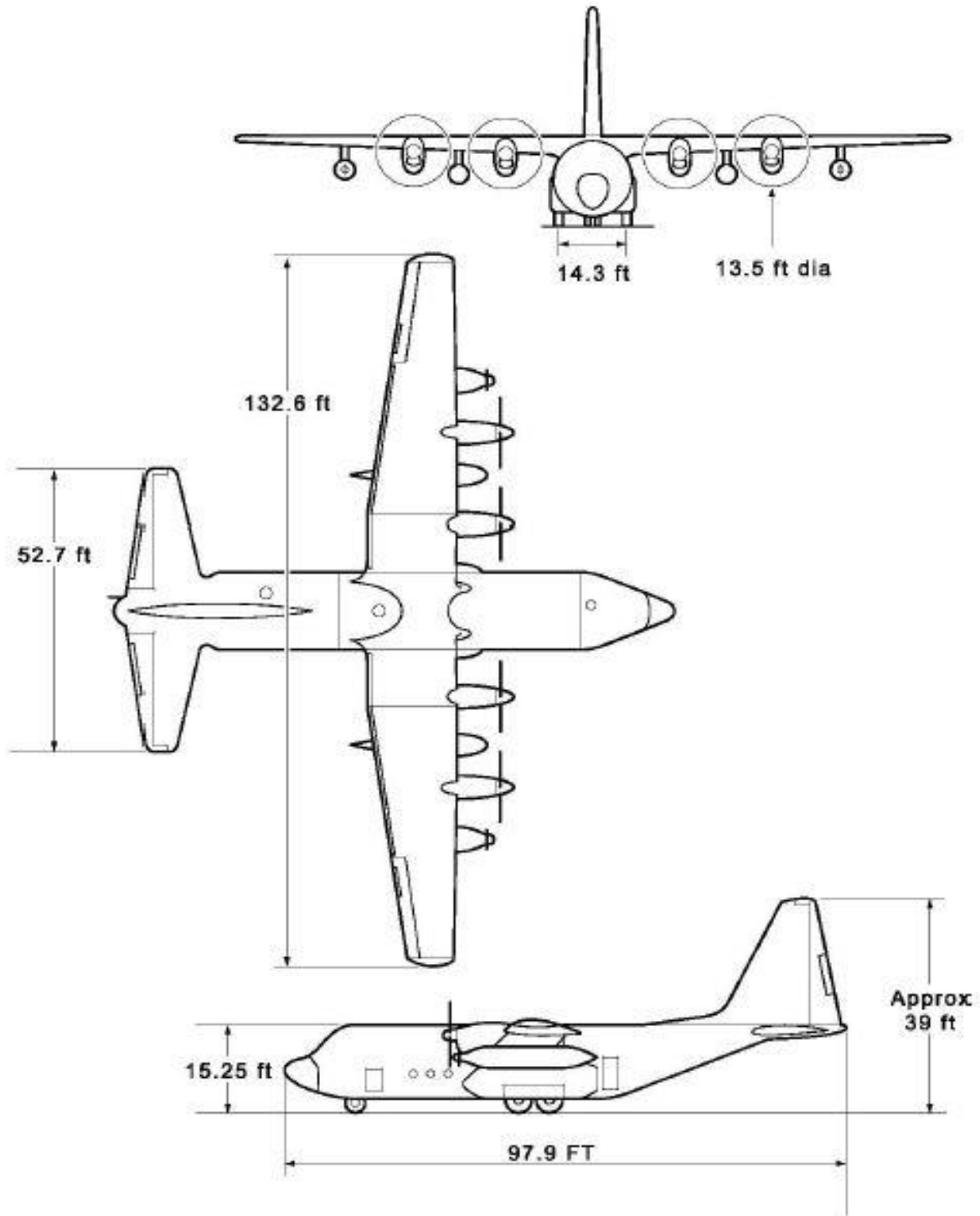
Aircraft strobes are red and white anti-collision strobe beacons located on the top and bottom of the fuselage. Prior to fuel transfer operations, the white strobes will be turned off. The aircraft is equipped with wing leading edge illumination lights, in-flight refuelling electro-luminescent formation strip lights located on the underside of the horizontal stabilizer and variable intensity blue formation lights located on the upper surface of the wings and fuselage. Navigation lights are capable of 4 coded flash rates for identification purposes. The default Ident rate is 2 flashes in 1.6 seconds.

8. **Mark facilities.** Fuel dump from wing-tips. Coded Navigation lights.
9. **RV aids. The aircraft has the following radio, navigation and RV aids:**
 - a. VHF, UHF, HF radios.
 - b. VOR, DME, TACAN, ADF, INS, GPS.
 - c. UHF/DF, A/A TACAN.

10. **Fuel Load (ISA, 10,000' runway, 1,500' MSL)** – Maximum fuel load is 25,700 kg (57,520 lb). In overweight conditions, maximum fuel load is 36,400 kg (81,520 lb).
11. **Average Fuel Burn Rate** – 5,000 lb/hr
12. **Nominal Average Reserve.** – 9,000 lb
13. **Dimensions.** See [Appendix A1](#)
14. **Receiver Clearances.** See [Annex C](#)

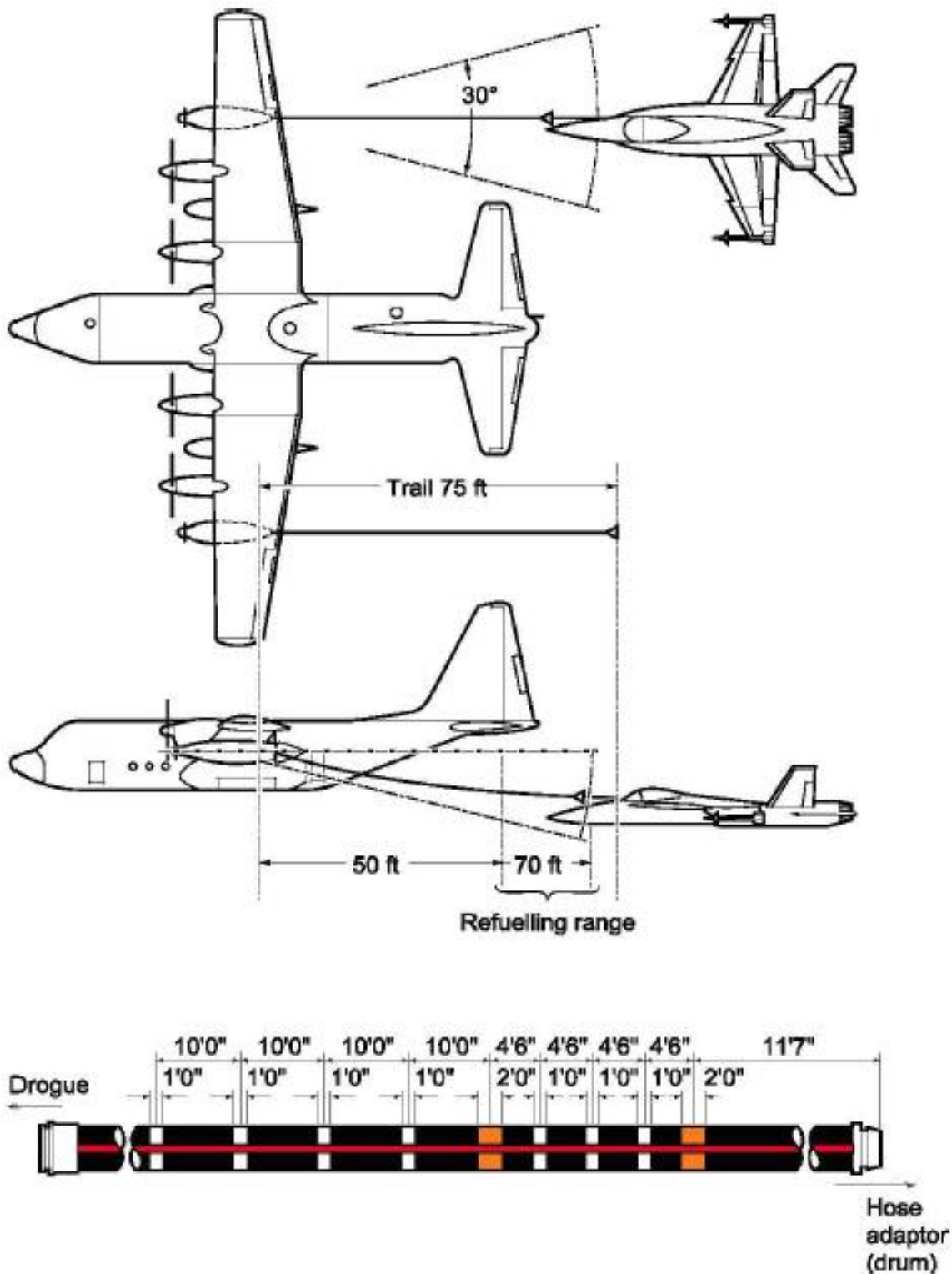
APPENDIX A1 – ANNEX A TO NATIONAL SRD – CANADA
CC130T Dimensions

Figure A1-1 CC130T Dimensions



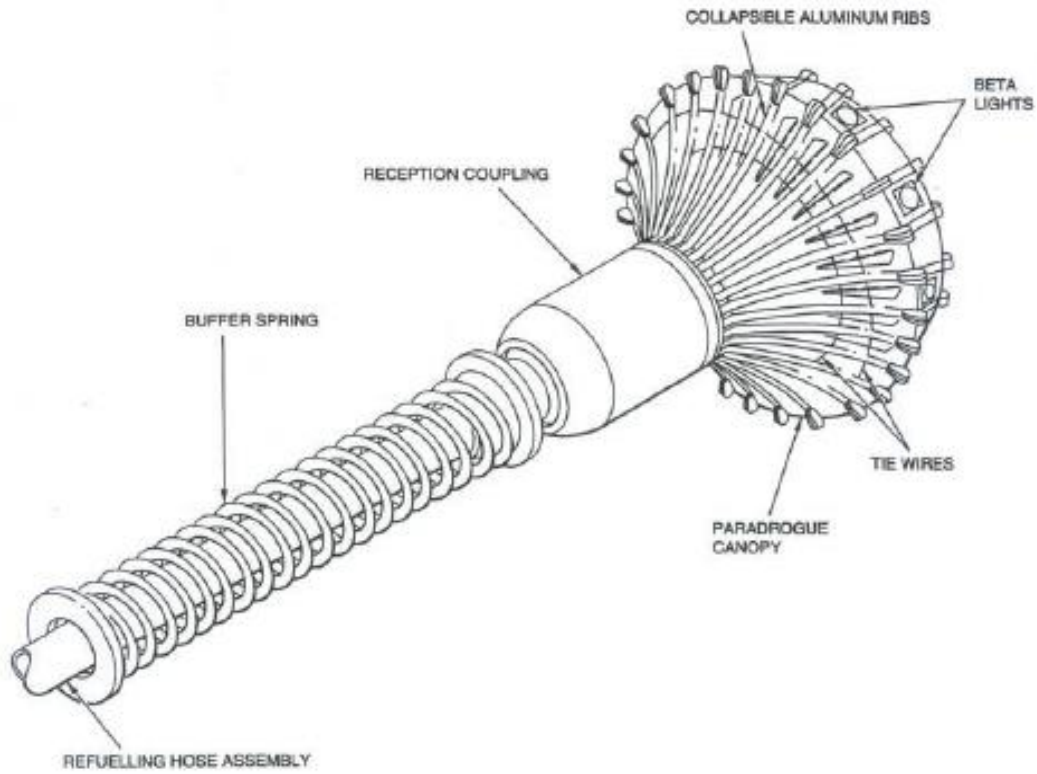
APPENDIX A2 – ANNEX A TO NATIONAL SRD – CANADA
CC130T – Refueling Range Limits and Hose Markings

Figure A2-1 CC130T Range Limits and Hose Markings



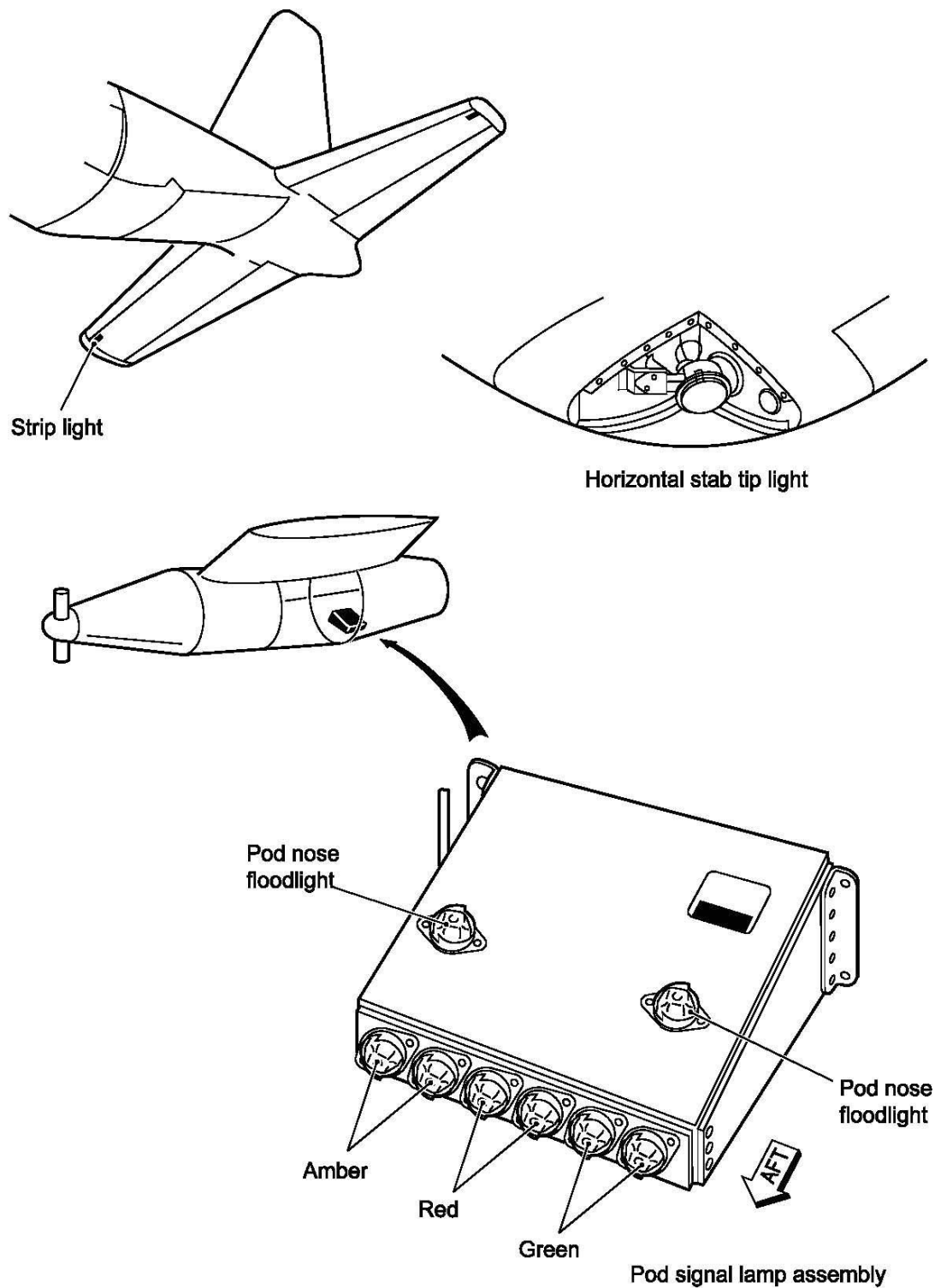
APPENDIX A3 – ANNEX A TO NATIONAL SRD – CANADA
CC130T – DROGUE

Figure A3-1 CC130T Drogue



APPENDIX A4 - ANNEX A TO NATIONAL SRD – CANADA
CC130T – LIGHTING

Figure A4-1 CC130T Lighting



LIST OF EFFECTIVE PAGES TO ANNEX A – NATIONAL SRD Canada

PAGE NUMBERS	EFFECTIVE PAGES
A-1 to A-3	Jun 17
A1-1	Jun 17
A2-1	Jun 17
A3-1	Jun 17
A4-1	Jun 17
LEP-A-1	Jun 17

ANNEX B TO NATIONAL SRD – CANADA

CC150T

CC150T Information

1. **AAR Equipment.** The CC150T aircraft is equipped with two under wing mounted AAR pods located about 3.5 m (12 ft) from the wing tips. The CME (Cobham Mission Equipment) MK 32B-907E pod incorporates an MA 4 coupling and a fixed drogue type. Hose length is 24 m (79 ft) at full trail. To attain fuel flow, the hose must be pushed in at least 2 m (7 ft), which is marked by the beginning of a white 1,5 m (5 ft) wide band. . For reference purpose, four additional white bands of 0.3 m (1ft) width are provided at 3 m (10 ft) intervals between the basket and the beginning of the optimum refuelling range. The optimum refuelling range is between the 15 m (50 ft) and 21m (70 ft). Fuel will continue to flow inside of 15 m (50 ft), into 10 m (35 ft); however, the Flight Refueling Specialist (FRS) will direct the receiver to move back, as the receiver approaches or trends towards the 16.5 m (55 ft) mark. (Hose Markings and Drogue are at [Appendix B1](#), Figure B1-1 and B2-2).
2. **Refuelling Altitude/Level and Speeds.** The AAR height band extends from 5000 ft AGL to 35000 ft ASL. Refueling speed limits range from 200 KIAS to 300 KIAS/ M 0.80.
3. **Maximum Transferable Fuel.** Maximum fuel load is 71,900 kg or 155,000 lbs, permitting a maximum transferable fuel of 61,400 kg or 135,000 lbs. The maximum offload is dependent on max TOW, transit distances and mission length.
4. **AAR Fuel transfer rate.** Maximum transfer rate is 1,270 kg/min (~2,805 lbs/min) per side.
5. **Regulated Fuel Pressure.** Hose end pressure is regulated to 50 psi (+/- 5 psi).
6. **Fuel Types Available for AAR:**
 - a. Primary fuel type is F34.
 - b. Alternate fuels depend upon airfield of loading; tanker can accept JET A1, JET A, JET B, and F44.
7. **Lighting.**
 - a. **Exterior Lighting.** The CC150T is equipped with exterior IR lighting which may interfere with NVG operations. The aircraft is not NVG compliant.

- b. **AAR Equipment Signal Lighting.** Two clusters of signal lights are installed in mountings at the end of each AAR pod left and right of the hose tunnel. Each cluster has two types of signal lights, normal (overt) and infrared (covert). They are arranged in a vertical row from top to bottom. (See Appendix B1, Figure B1-3).
- (i) **Normal Signal lights (Overt).** The overt signal lights are red, amber and green high intensity LEDs. The intensity of these lights is variable; however, the level of infrared radiation emitted by them will not degrade NVG operations.
 - (ii) **Infrared lights (Covert).** A set of three infrared lights is included in each light cluster. These lights are visible to NVGs and indicate the same signal function as the normal lights using an infrared pattern.

The lights signal the following:

Steady Red	Pod malfunction - do not make contact. (If already in contact, disconnect until malfunction cleared)
+Flashing Red+	Breakaway (after breakaway sequence of 10 sec on both pods, signal lights will change to Steady Red)
Steady Amber	Ready for contact
+Flashing Amber+	Fuel flow stops. Hose pushed in too far
+Flashing Amber+	Fuel still flowing. Hose at forward end of refueling range (with Steady Green)
Steady Green	Fuel flowing
+Flashing Green+	Receiver fuel tanks full

During night AAR operations, the hose markings near the pod aft fairing are illuminated by a white light (located in the aft fairing), when the AAR advisory lights are dimmed. The drogue canopy is fitted with luminous reflecting beta lights.

c. **Aircraft Lighting**

- (i) The CC150T has fully dimmable floodlights installed:
 - In the refuelling pod pylons, facing inboard and outboard, to illuminate the underside surfaces of the wings, outboard engine nacelles and rear belly.

- In the lower empennage area to illuminate the underside surfaces of the horizontal stabilizers.
 - Logo lights illuminate the vertical tail.
- (ii) The CC150T has sets of electro luminescent (EL) formation lighting strips installed on each side of the:
- Forward and rear fuselage.
 - Tail cone.
 - Wing-tip.
 - Vertical Stabilizer.
- (iii) Aircraft strobes are red and white combination anti-collision/rendezvous strobe beacons. The white rendezvous beacons have programmable flash patterns. The basic wing-tip navigation lights are; starboard - green/white and port - red/white.
8. **Mark facilities.** A coded upper and lower anti-collision light is provided. During AAR the strobe lights will be switched off
9. **RV aids.** The aircraft has the following radio, navigation and RV aids:
- a. VHF, UHF, HF, SATCOM and HQ radios
 - b. VOR, DME, ADF, IRS, GPS.
 - c. VHF/UHF DF, TCAS, A/A TACAN.
10. **Fuel Load** (ISA, 10,000' runway) – On a standard day, the CC150T can have an average of 150,000lbs on board. That would leave 90,000lbs offload giving a 2hr on station and 1hour transit to and from the area, including reserve fuel.
11. **Average Fuel Burn Rate** – 11,500 lbs/hr.
12. **Nominal Average Reserve** 4,800 lbs.
13. **Dimensions.** The CC150T is 46.66 m (153 ft, 1 in) long and has a wingspan of 43.9 m (144 ft, 0 in).
14. **Receiver Clearances.** See Figures C1-1 and C2-1 for receiver and tanker clearances and compatibility (any limitations or restrictions to these clearances will be included in the tables).

APPENDIX B1 - ANNEX B TO NATIONAL SRD – CANADA
CC150T WING-MOUNTED PODS

Figure B1-1 CC150T Hose markings

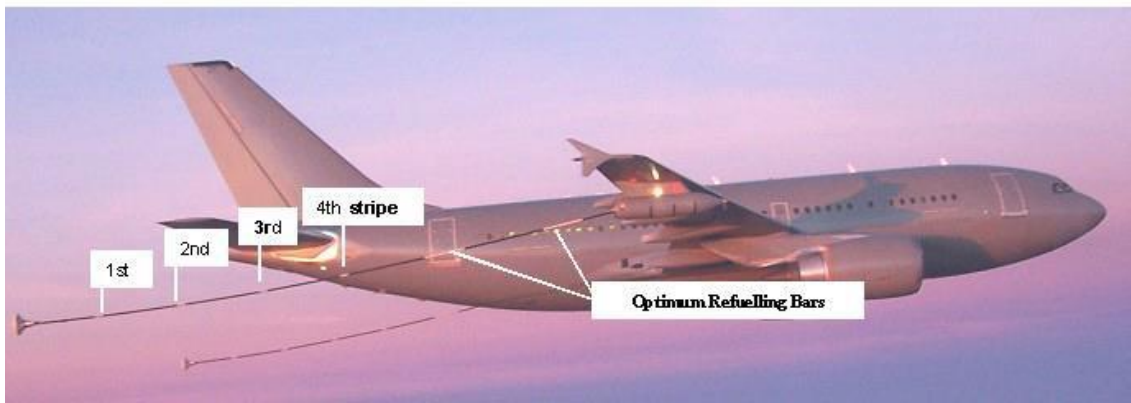
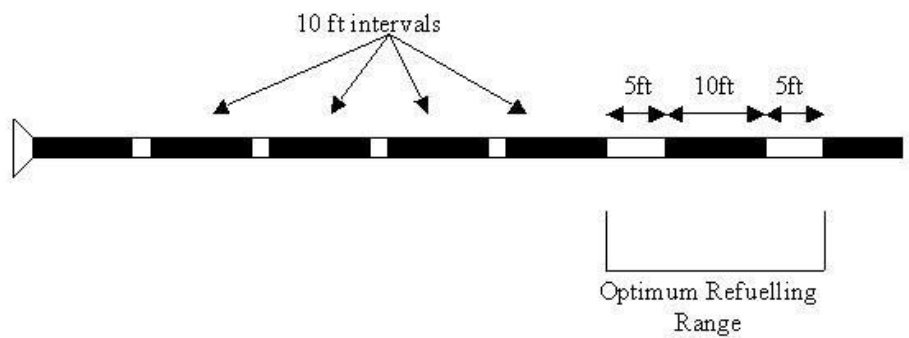


Figure B1-2 CC150T Drogue

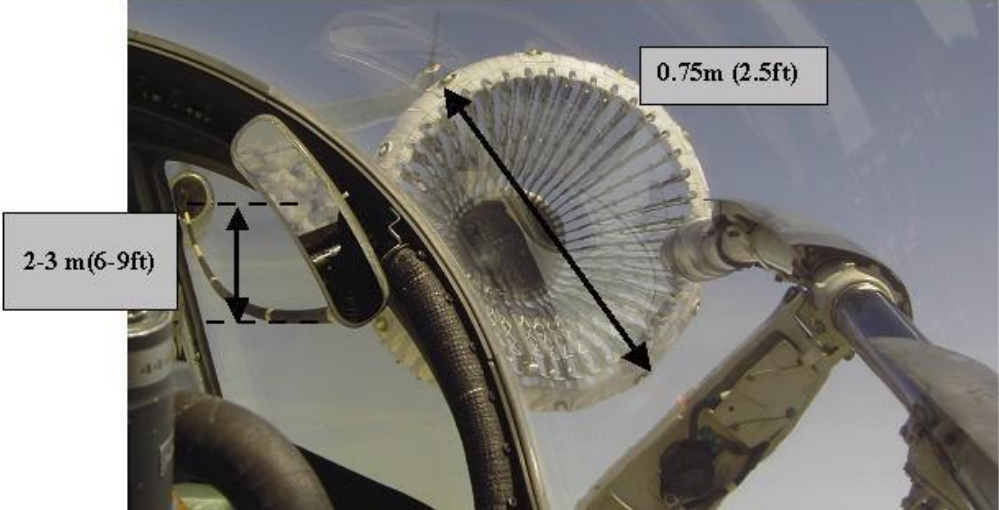
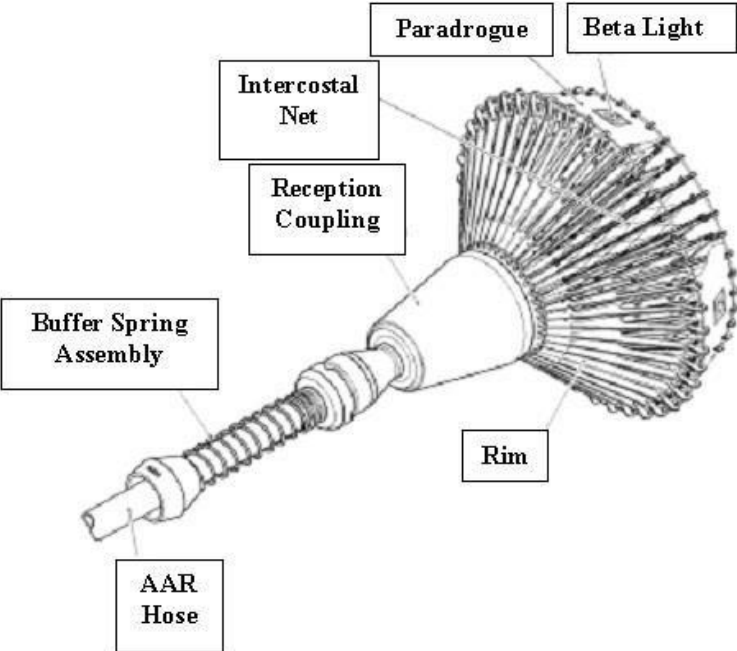
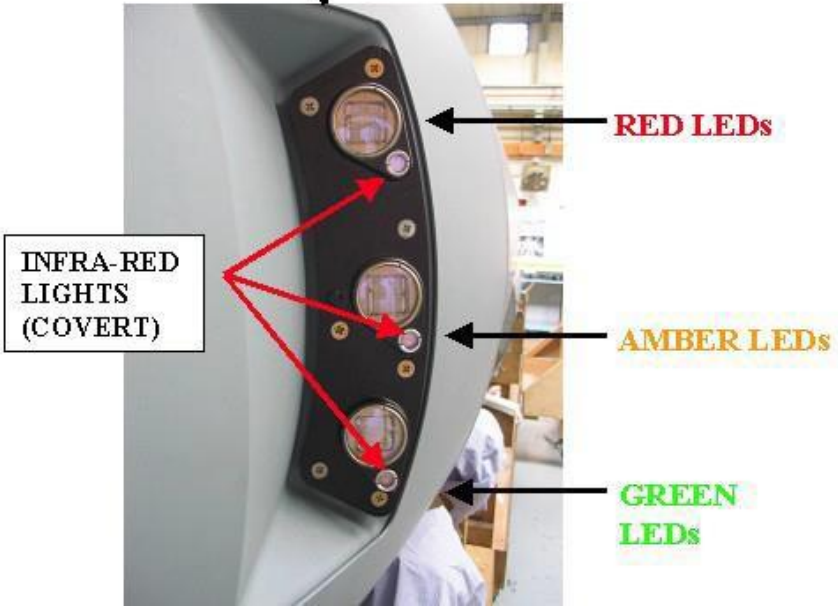
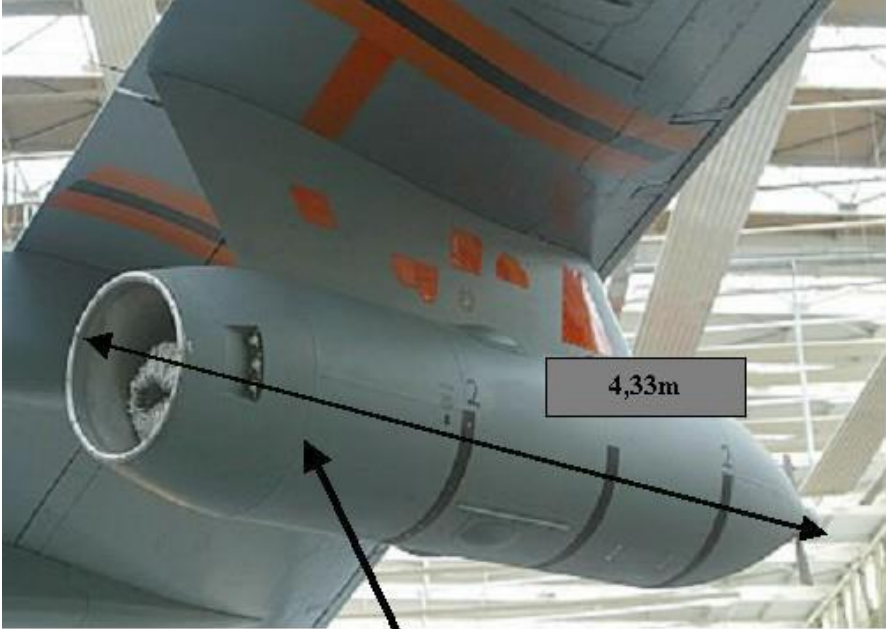


Figure B1-3 CC150T Pod and lights



LIST OF EFFECTIVE PAGES TO ANNEX B – NATIONAL SRD Canada

PAGE NUMBERS	EFFECTIVE PAGES
B-1 to B-3	Jun 17
B1-1 to B1-3	Jun 17
LEP-B-1	Jun 17

<p>ANNEX C TO NATIONAL SRD - CANADA RECEIVER DATA/CLEARANCE</p>

1. **Introduction.** This annex provides technical compatibility, clearances and important data essential for safe Probe/drogue operations with national tankers.
2. Foreign nations that wish to conduct AAR operations with RCAF aircraft must obtain an AAR operational flight release through the RCAF Operational Airworthiness Authority, Comd 1 Cdn Air Div. Air Trans-com (see paragraph 4a of main body for POC details). If an Aircraft/Receiver combination is not shown in either the Matrix located in Figure C1-1 of this National SRD – Canada, then there must be a current and specific Air-to-Air Refueling Clearance Letter or Specific Purpose Flight Permit (SPFP) that otherwise authorizes AAR in that combination.

APPENDIX C1 – ANNEX C TO NATIONAL SRD – CANADA
CANADA TANKERS TO FOREIGN MILITARY
RECEIVERS OPERATIONAL CLEARANCE AND
TECHNICAL COMPATIBILITY

- Information.** The following boards are to be read with additional information. Foreign receivers not permanently cleared by the RCAF Technical Authority (TA) but are capable of connecting to the MA-3 or MA-4 coupler (as applicable) certified to MIL-C-81975 B and meeting ATP-3.3.4.2 standards may be cleared to refuel from Canadian tankers. Canada has assessed the aircraft types listed as compatible, but AAR is not to be conducted unless the receiver nation has completed a similar acceptance for the tanker-receiver pairing. The RCAF TA and Operational Airworthiness Authority (OAA) are in the process of updating receiver clearances.

Figure C1-1 CANADA Receivers/Foreign Military Operational Clearance and Technical Compatibility Matrix

COUNTRY	AIRCRAFT	CC130T	PODS	CC150T	PODS
AUSTRALIA	F/A-18 A/B	(1)	C2	(2)	C2
	F/A-18 F	(1)	C1		C2
CANADA	CF18A/B		C3		C3
CZECH REPUBLIK	JAS 39 C/D				C1
FRANCE	Rafale		C1	(3)	C2
	M2000	(3)		(3)	C2
	S Etendard		C2		C2
FINLAND	F/A-18 C/D		C1		
GBR	Tornado GR4/4A		C2		C2
	Typhoon Mk 3 /4		C2		C2
GERMANY	Tornado ECR	(4)	C2	(5)	C2
	Tornado IDS		C2		C2
	EF 2000		C2		C2
HUNGARY	JAS 39 C/D				C1
ITALY	AMX		C2		C2
	Tornado		C2		C2
SPAIN	F-18A/B		C2		C2
SWEDEN	JAS 39		C1		C1
SWITZERLAND	F/A-18 C/D		C1		
UAE	M2000		C2		C2

**Annex C to NATIONAL SRD - Canada
Appendix C1**

COUNTRY	AIRCRAFT	CC130T	PODS	CC150T	PODS
USA	F/A-18 A/B/C/D		C2		C2
	F/A-18 E/F		C2		C2
	EA 18G		C1		C2
	AV-8B		C2		C2
	EA-6B		C2		C2

- Key: X – Receiver has technical compatibility, no clearance, with this equipment.
 C1 – Receiver has Category 1 clearance with this tanker.
 C2 – Category 2 clearance these aircraft are technically and operationally compatible.
 C3 – Receiver has Category 3 Clearance with this equipment.

Notes:

- (1) Listed as Cat 3 in AUS SRD.
- (2) Listed as Cat 1 in AUS SRD.
- (3) Listed as Cat 3 in FRA SRD
- (4) Listed as Cat 3 in DEU SRD
- (5) Listed as Cat 1 in DEU SRD

Figure C1-2 Applicable References to CANADA Receivers/Foreign Military Operational Clearance and Technical Compatibility Clearances

AIRCRAFT	COUNTRY	CC 130T REFERENCES	CC 150T REFERENCES
F/A-18 A/B/C/D	AUSTRALIA	DAEPM(TH) 22125 041355ZMAY00 (A-D)	CC150-SRD-001
	FINLAND	PV-17-0027-FPF (C/D)	
	SPAIN	11500-HERCULES (DTA3-4-4) 15OCT98 (A/B)	CC150-SRD-001
	SWITZERLAND	PV-17-0026-FPF (C/D)	
	USA	DAEPM(TH)22017 192018ZAPR96	CC150-SRD-001
F/A-18 E/F/G	AUSTRALIA	PV-16-0039-FPF (F)	CC150-SRD-001
	USA	DAEPMTH 22058 Jun 08 (E/F) PV-14-0033-FPF (E/A-18G)	CC150-SRD-001
RAFALE	FRANCE	PV-16-0035-FPF	CC150-SRD-001
TORNADO GR4/4A	GBR	Searching & COS OPS 123 111830ZJUL95	CC150-SRD-001
	ITALY	DAEPM(TH)22115 272043ZAPR00	CC150-SRD-001
	GERMANY	DAEPM(TH)22123 032130ZMAY00	CC150-SRD-001
TYPHOON	GBR		CC150-SRD-001
EF 2000	GERMANY	DAEPM(TH)22123 032130ZMAY00	CC150-SRD-001
JAS 39	SWEDEN	PV-17-0029-FPF	
AMX	ITALY	DAEPM(TH)22114 272008ZAPR00	CC150-SRD-001

**Annex C to NATIONAL SRD - Canada
Appendix C1**

AIRCRAFT	COUNTRY	CC 130T REFERENCES	CC 150T REFERENCES
M2000	FRANCE		CC150-SRD-001
	UAE		CC150-SRD-001
AV-8B	USA	DAEPM(TH)22121 052114ZJUN97	CC150-SRD-001
EA-6B	USA	DAEPM(TH)22106 061615ZAPR98	CC150-SRD-001

Note:

CC150-SRD-001 – Foreign Receiver Log: The CC150 Foreign Receiver Log is regulated by 1 Canadian Air Division. As per CC150-SRD-001, aircraft has successfully completed the substantial number of contacts during OP UNIFIED PROTECTOR and/or OP INHERENT RESOLVE significantly surpassing the required clearance requirements, in lieu of formal flight testing (as per SRD 2). For further information, contact the CC150 technical clearance POC (See para 5d).

APPENDIX C2 – ANNEX C TO NATIONAL SRD – CANADA
CANADA RECEIVERS TO FOREIGN MILITARY AND NON MILITARY TANKERS CLEARANCE AND TECHNICAL COMPATIBILITY

1. **Introduction.** This matrix provides Royal Canadian Air Force (RCAF) receiver clearances with Foreign Military and Non-Military Tankers.
2. **RCAF Receivers and Foreign Military and Non Military Tankers Technical Clearance.** Confirmation that a technical compatibility assessment has been conducted and found to be satisfactory is published by the appropriate tanker technical authority in its own National Annex. The aim of Appendix C2 to this Annex is to list RCAF AAR clearances on Foreign Military and Non-Military Tankers in order to help RCAF receiver crews to identify the availability of a clearance before performing AAR operations.

Note: RCAF Receiver crews must access tanker’s National Annex to verify last technical clearance updates before conducting AAR operations with a Foreign Military and Non-Military Tanker.
3. Further information and access to AAR clearance certificates can be obtained from the AAR interoperability matrix in ATP-3.3.4.2 or by contacting the AAR POC in each nation’s SRD.

Figure C2-1 Canadian Receivers with Foreign Military and Non Military Tankers Clearance and Technical Compatibility Matrix

COUNTRY UPDATE DATE: Apr 17	AIRCRAFT		CF-18	
AUS	KC-30A	POD	C3	
FRA	C-135FR	POD	C3	
	KC-135RG	BDA	C3	
	C-160NG	HDU	C3	
USA	KC-10	POD	X	
	KC-135	BDA	X	
		MPRS	X	

Key: X – Receiver has technical compatibility, no clearance, with this equipment
 C1 – Receiver has Category 1 Clearance with this equipment
 C2 – Receiver has Category 2 Clearance with this equipment
 C3 – Receiver has Category 3 Clearance with this equipment

APPENDIX C3 – ANNEX C TO NATIONAL SRD – CANADA
RECEIVERS AAR INFORMATION ON CANADIAN
TANKERS

Figure C3-1 AAR Mission Planning Data (CC130T)

TYPE RCVR	BUDDY CRUISE IAS / (CAS)	OPTIMUM AAR ALT / IAS /	OVERRUN IAS	CLOSURE RATE	PROBE LIMIT MACH ②	RENDEZVOUS				REMARKS	
						UHF	VHF	HF	A/A TAC		
									X		Y
JAS 39 GRIPEN	- / (300)	150-200 / 220-240	335	4 kts	0.90	X	X				
TORNADO	- / (300)	150-200 / 220-240	310	4 kts	0.77	X	X	X	X	X	
EF2000	- / (300)	150-200 / 220-240	335	4 kts	0.80	X	X		X	X	
MIRAGE 2000 B/C/D/N/-5/-9	- / (300)	150-200 / 220-240	335	4 kts	Tbd	X	X		X	X	
RAFALE C/B/M	- / (300)	150-200 / 220-240	Tbd	Tbd	Tbd	X	X		X	X	
F/A-18 A-D	- / (300)	150-200 / 220-240	Tbd	4 kts	0.80	X	X		X	X	
(US) F/A-18 A-G	- / (300)	150-200 / 220-240	Tbd	5 kts	0.80	X	X		X	X	
(US) AV-8B	- / (300)	150-200 / 220-240	Tbd	2 kts	0.80	X	X	X	X	X	
(US) EA-6B	- / (300)	150-200 / 220-240	310	Tbd	0.68	X	X	X	X		

Notes:

① Use only one pod and one A/R pump. Simultaneous AAR is prohibited. Inform the receiver of any observed fuel venting; continuation of AAR will be at the discretion of the receiver pilot.

② Probe limit Mach is based upon aerodynamic loads on the receiver's probe while in contact.

Figure C3-2 AAR Mission Planning Data (CC150T).

TYPE RCVR	BUDDY CRUISE IAS	OPTIMUM AAR ALT / IAS	OVERRUN IAS	CLOSURE RATE	RENDEZVOUS				
					UHF	VHF	HF	A/A TAC	
								X	Y
TORNADO	270	140-250 /270	310	4 kts	X	X	X	X	X
EUROFIGHTER TYPHOON	300	150- 280 /280	335	4 kts	X	X		X	X
MIRAGE 2000	300	300 /300	335	4 kts	X	X		X	X
RAFALE	300	250 / 295	TBD	Tbd	X	X		X	X
F/A-18 A-D	300	170-280 / 305	335	4 kts	X	X		X	X
(US) F/A-18 A-G	300	170-280 / 275-	335	5 kts	X	X		X	X
(US) AV-8B	300	150-200 / 275	310	2 kts	X	X	X	X	X
(US) EA-6B	250	170-240 / 275	310	Tbd	X	X	X	X	

Note:

Hose Operations are prohibited when:

Slats and flaps are extended;

During severe and extreme turbulence; and

In moderate or severe icing.

APPENDIX C4 – ANNEX C TO NATIONAL SRD – CANADA
COMMON WARNINGS, CAUTIONS AND NOTES

1. **WARNINGS, CAUTIONS and NOTES.** The following WARNINGS, CAUTIONS and NOTES are common to all receiver aircraft and must be read in conjunction with the receiver-specific information published in the appropriate paragraphs of [Appendix C5](#) to this Annex.



CAUTION

In moderate turbulence the hose and drogue will oscillate vertically up to three drogue diameters. This oscillatory motion will preclude successful air-to-air refueling operations. Tanking in greater than moderate or severe turbulence is not recommended.

**APPENDIX C5 – ANNEX C TO NATIONAL SRD – CANADA
RECEIVER SPECIFIC AAR INFORMATION**

Information. NSTR

Subject	Paragraph
CF18	1.1

LIST OF EFFECTIVE PAGES TO ANNEX C – NATIONAL SRD Canada

PAGE NUMBERS	EFFECTIVE PAGES
C1	Jun 17
C1-1 to C1-3	Jun 17
C2-1	Jun 17
C3-1 to C3-2	Jun 17
C4-1	Jun 17
C5-1	Jun 17
LEP-C-1	Jun 17