

## USER MANUAL

## PCT600OC – User Manual

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## Manual Coverage

This manual is intended exclusively for **PCT600OC Universal Pallet Container Dolly**. It provides instructions, guidelines, and specifications specific to this equipment and should not be used for any other products.

Using this manual for equipment other than those listed may result in incorrect operation, improper maintenance, or potential safety hazards.

## Reading This Manual

Read and understand this manual thoroughly before using the equipment to ensure safe and proper use. Failure to follow the instructions may result in damage or injury.

	<b>WARNING</b> Explains something that, if not obeyed, could cause death or injury to people.
	<b>NOTICE</b> Explains something that, if not obeyed, could cause damage or a malfunction in the equipment.
	<b>DO NOT</b> Means “Do not”, “Do not do this” or “Do not let this happen”
	<b>IMPORTANT NOTE</b> Helpful information
	<b>PART/S INVOLVED</b> Contains information about the part/s.

Pictures in this manual may be different to actual vehicle. They are used as a guide to identify specific components.

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## Introduction

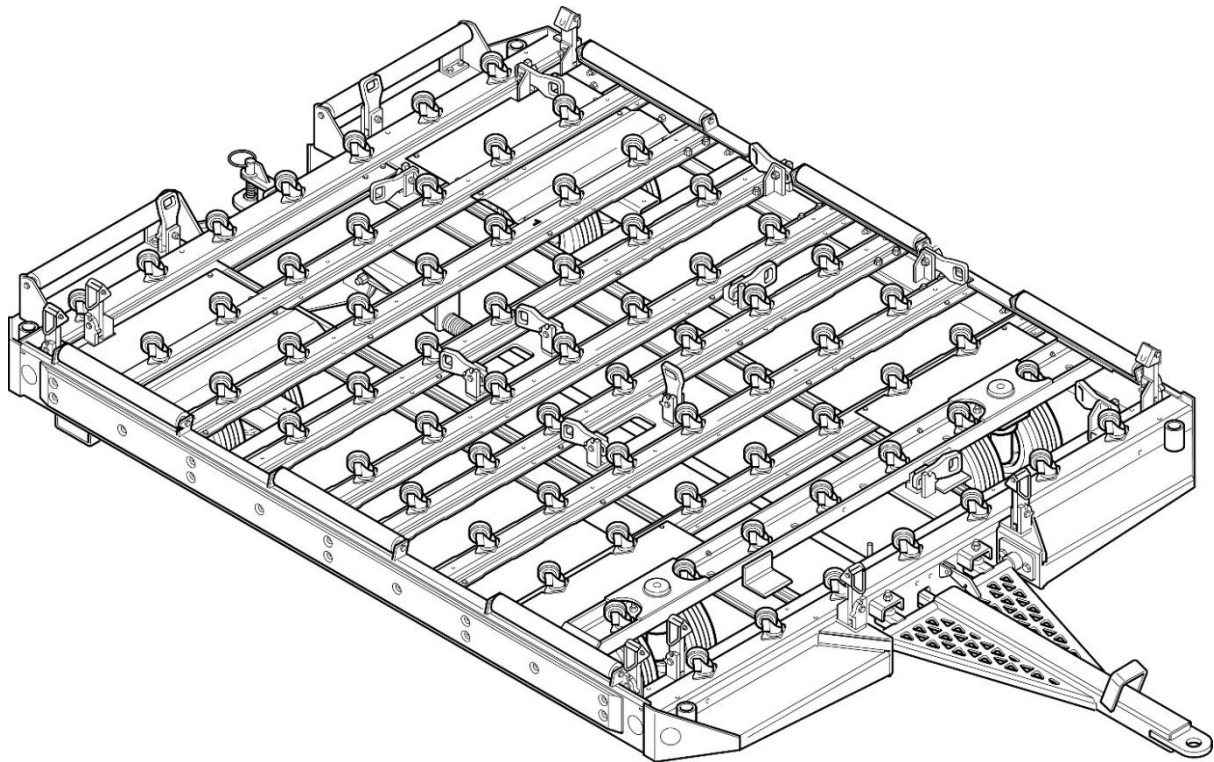
The PCT600OC Universal Pallet Container Dolly is specifically designed for the transport of aircraft-compatible cargo pallets within airport premises.

This Cargo Dolly is designed to be towed by a Baggage Tractor. Multiple dollies can be connected in tandem, provided the total load remains within the towing capacity of the Baggage Tractor and complies with the regulations set by the respective airport or transport authority.

 **PCT600OC is not intended for use on public roads.**

The PCT600OC can carry the following combinations of Unit Load Device (ULD) containers:

- One (1) LD2 ULD
- Two (2) LD2 ULD
- Four (4) LD2 ULD
- One (1) LD3 ULD
- Two (2) LD3 ULD
- One (1) LD7 ULD
- One (1) LB8 ULD
- Two (2) LD8 ULD



## Features and Specifications

### Pallet Compatibility

- 88 in. x 125 in. aircraft pallets
- 96 in. x 125 in. aircraft pallets

### Construction

- Heavy-duty steel frame assembly
- Stackable design for efficient shipping and storage

### Load Handling Features

- 70 enclosed castors for smooth cargo movement
- 8 rollers for easy pallet positioning
- Spring-loaded tip-up pallet stops to secure cargo in place

### Wheel Configuration

#### Front Wheels:

- 2 dual wheels on swivel castors for maneuverability

#### Rear Wheels:

- 2 sets of dual wheels, fixed for stability

#### Tire Type:

- Solid rubber tires for durability and low maintenance

### Braking & Towing System

- Tow bar-activated braking system: Engages rear brakes when the tow bar is raised
- Spring-loaded E-Type hitch at rear: Allows multiple PCT600OC units to be linked in tandem

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	Value	Notes
Dimensions		
Length (Towing Position)	4661 mm / 183 ½ in	
Length (Tow Bar Raised)	3514 mm / 138 5/16 in	
Width	2592 mm / 102 1/16 in	
Height	521 mm / 20 ½ in	
Weight	1089.5 kg / 2401.9 lbs	
Max. Permitted Load	7000 kg / 15432 lbs	
Operating Temperature	-50 to +70 °C / -58 to +158 °C	Ambient Temperature
Storage Temperature	-50 to +70 °C / -58 to +158 °C	Ambient Temperature
Humidity Range	0 to 100%	Relative Humidity
Max. Towing Speed	13 kph / 8 mph	Maximum speed recommended by the IATA for a Cargo Dolly with un-sprung wheels. (AHM 427, ULD Transportation, refers)



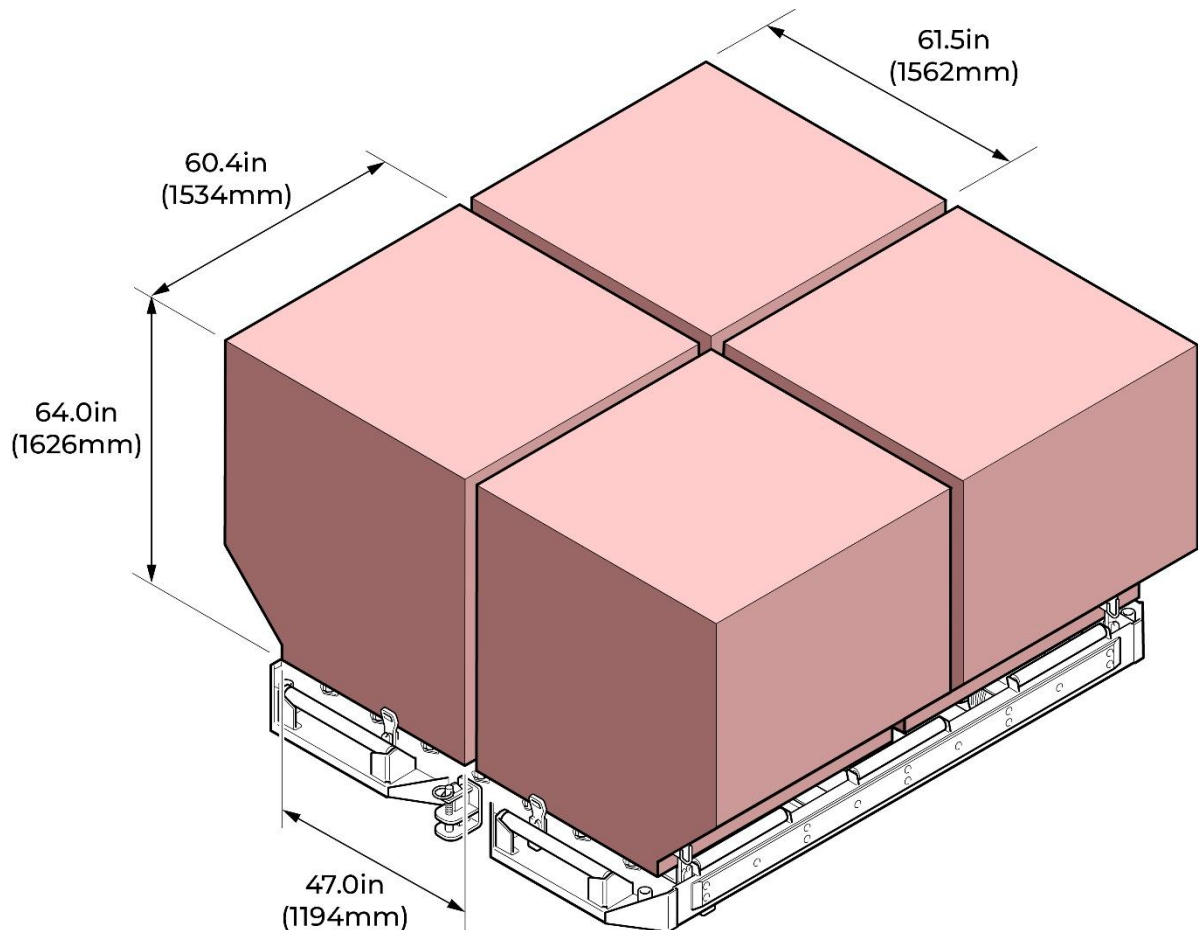
**Warranty**

This equipment is covered by a limited warranty against defects in materials and workmanship under normal use and service. Unauthorized modifications, improper use, or failure to follow maintenance guidelines may void the warranty.

Please contact Avro GSE for a full copy of the warranty policy.

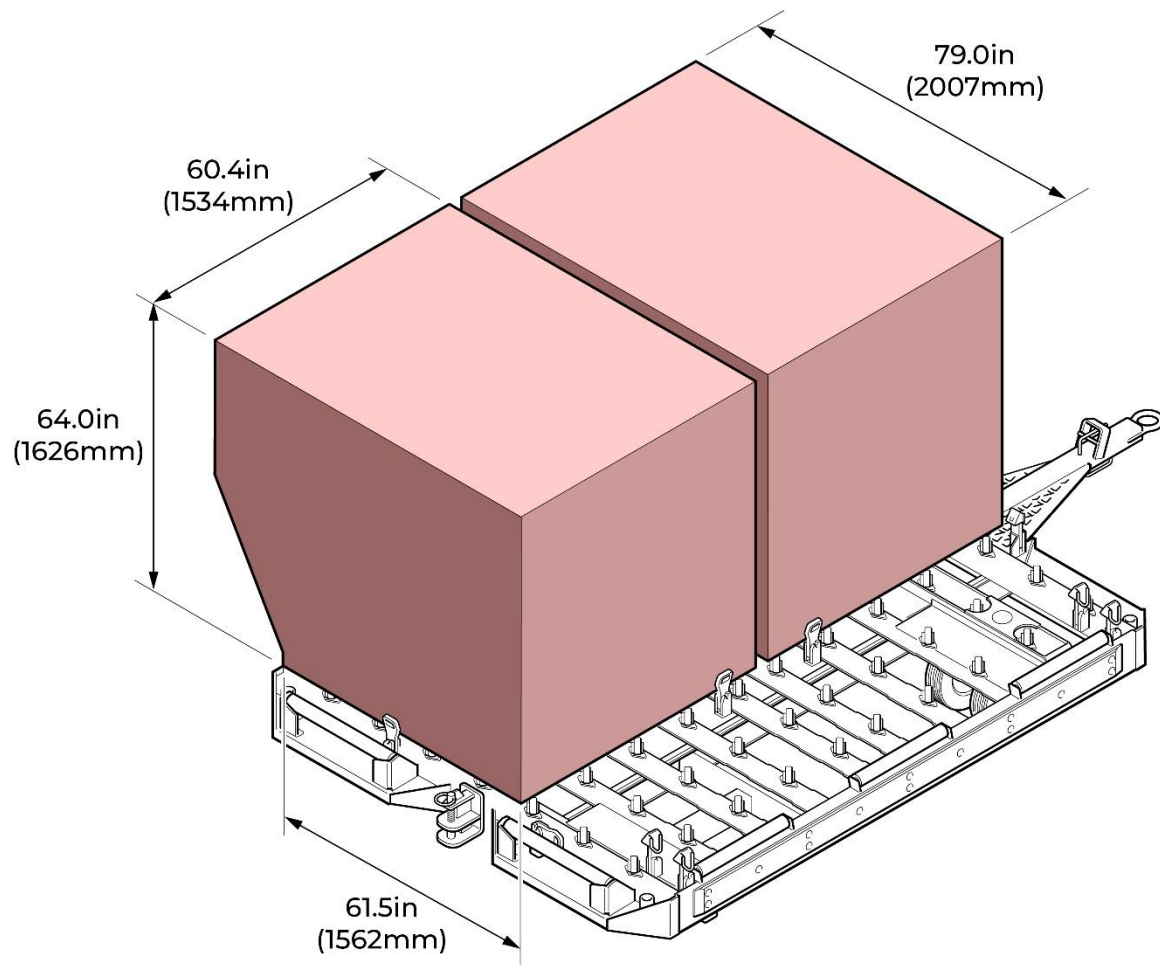
## Loading Diagrams

### LD2 Container – Four (4)



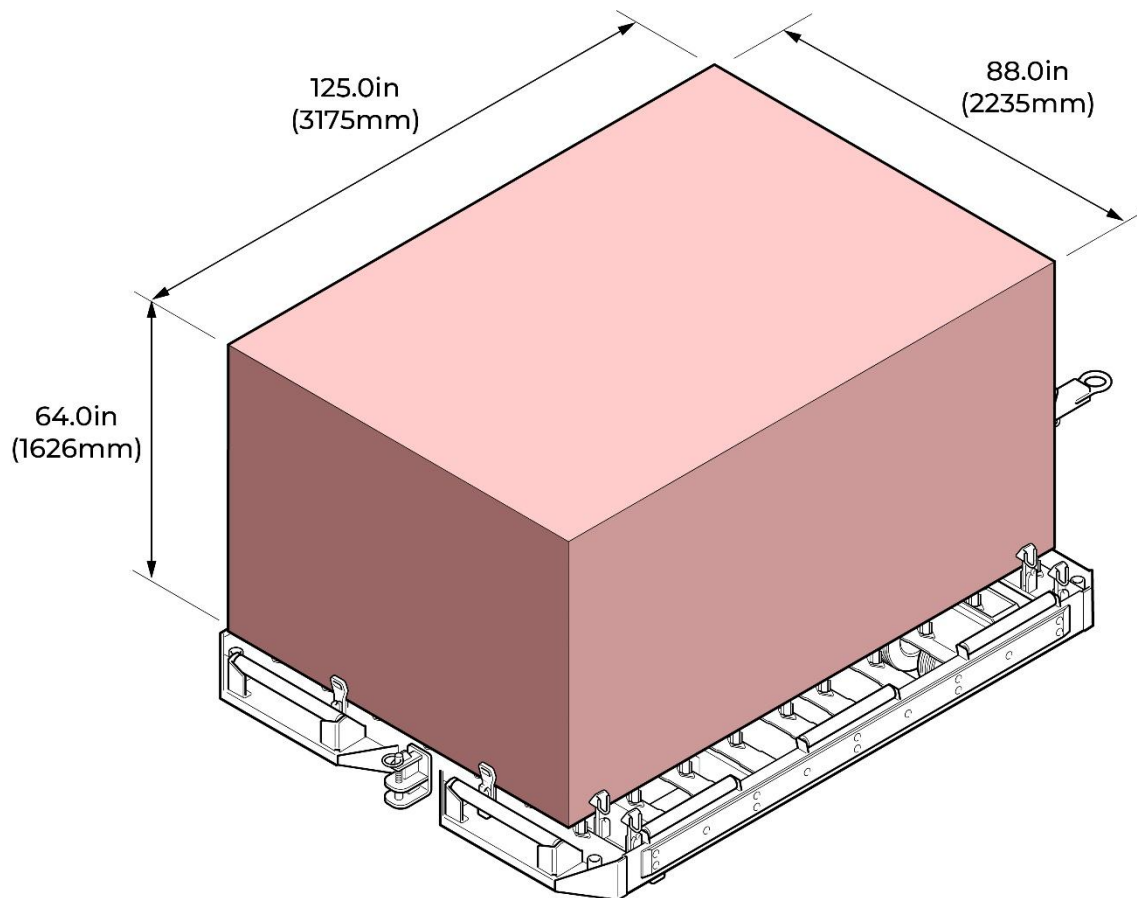
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## LD3 Container – Two (2)



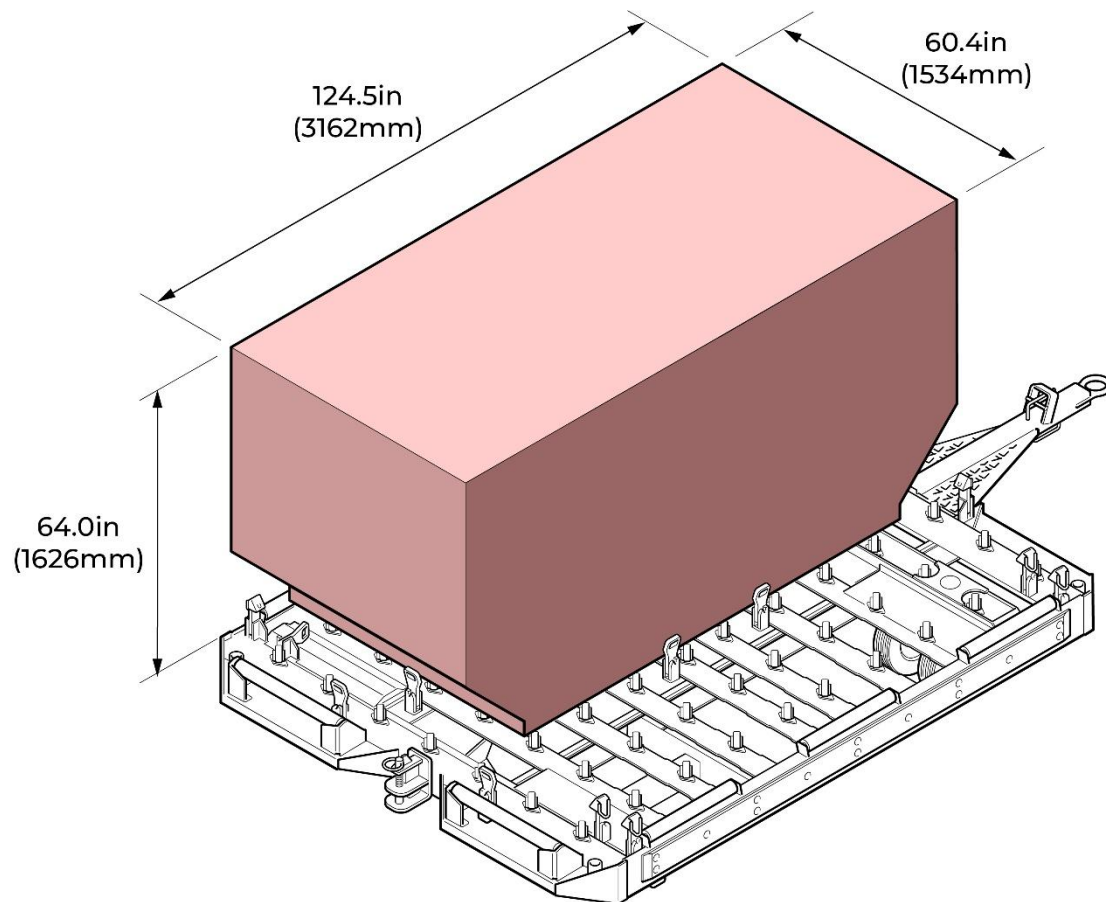
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## LD7 Container – One (1)



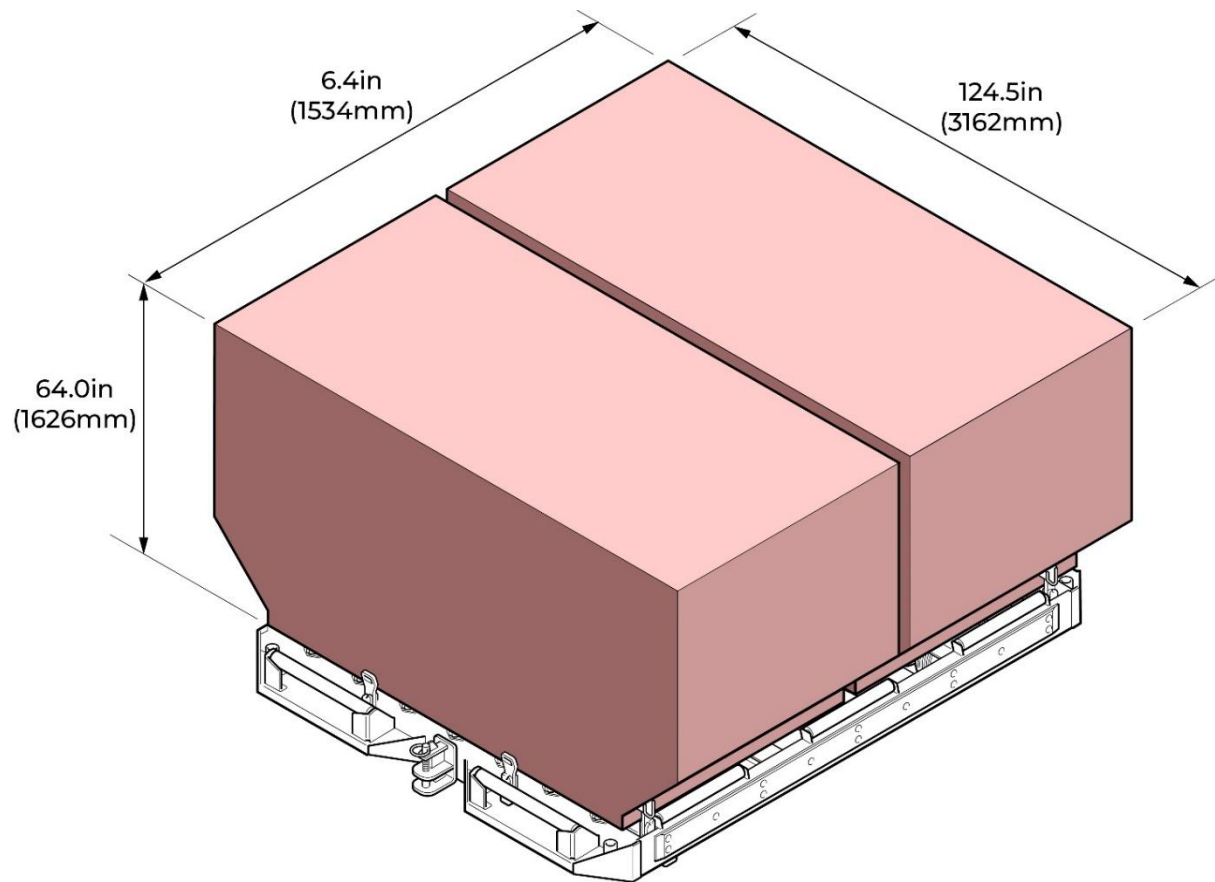
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## LD8 Container – One (1)



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LD8 Container – Two (2)



## Equipment Maintenance

Scheduled maintenance for the PCT600OC Universal Pallet Container Dolly is limited to the activities specified in the accompanying maintenance table. The intervals provided are approximate and assume heavy usage conditions.

These intervals may be adjusted by  $\pm 10\%$  without negatively affecting the equipment's performance or reliability. However, each dolly should be inspected and serviced according to its actual usage patterns, which may vary depending on operating hours and environmental conditions such as dust, moisture, or exposure to corrosive substances.

When performing maintenance, it is important to follow the correct fastening procedures.


 **Thread-locking adhesive must not be applied to any fasteners.**

For wheel nuts, a minimum torque setting, as indicated in the maintenance table, must be strictly followed using a calibrated torque wrench.

For all other fasteners, it is sufficient to tighten them using standard hand tools. There is no requirement to apply a specific torque or use a torque wrench for these.

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## Maintenance Activity Table


	Task	Monthly	6 Months
1	<b>Cleaning</b>		
a.	Use water and degreaser, or a domestic detergent and water solution.	X	X
	<b>Do not use industrial cleaning agents, or caustic agents, or aircraft de-icing and cleaning agents.</b>		
	Use of a spray washer is permitted.		
2	<b>Visual and Mechanical Inspection</b>		
	During the inspection tighten any fasteners that are loose.		
a.	Main Frame undamaged. Minor damage or corrosion is acceptable. Damage to the Main Frame that affects the operation, requires the replacement of the Cargo Dolly.	X	X
b.	Check the Swivel Castors. Replace any that are damaged or missing.	X	X
c.	Check the Rollers. Replace any that are damaged or missing.	X	X
d.	Check that the e-hitch is undamaged, secure, and functions correctly. Replace if required.	X	X
e.	Check Tow Bar is undamaged, secure, and functions correctly. Replace Tow Bar and/or Tow Bar Mounting Assembly, if required.	X	X
f.	Check that the Towbar Adjustable Stops are present and undamaged. Replace if missing or damaged.	X	X
g.	Check that all Hood Spring Stops and Handle Stops are present, secure, undamaged and function correctly. Replace any that are missing or unserviceable.	X	X
h.	Check the Four Wheel Axle Assemblies and the Two Front Swivel Axle Assemblies for wear, damage, security of attachment, trapped debris, and wheel rotation. Remove debris. Check Front Swivel Axle Assemblies for swivel function. Replace any that are badly worn, damaged or not fully functional.	X	X
i.	On all wheels, check that the wheel nuts are present. Make sure that all wheel nuts are tightened to a MINIMUM torque of 156 Nm (115 ft/lbs).	X	X
j.	Check Brake Line Linkage and associated threaded rods, spring, threaded yoke, and fasteners, are all present,	X	X




	Task	Monthly	6 Months
k.	secure, serviceable, and function correctly. Replace any that are missing or unserviceable.		
	Check Brake Bar is present, undamaged, secure, and functioning. Check associated Brake Shoes are present and not so worn that brake function is degraded. Replace if missing or unserviceable item.	X	X
l.	Check side bumpers are present and secure. Replace if required.	X	X
m.	Check red and yellow reflective stickers are present. Replace if required.	X	X
3	<b>Lubrication</b>  Use a heavy-duty, marine grade, agricultural grade, or military grade, bearing grease suitable for long term use outside in severe environments. For example: Plews & Edelmann LubriMatic type 11404 Marine Trailer Wheel Bearing and Corrosion Control Grease. Or an equivalent. For example: MIL-PRF-10924 (NATO Code No G-403) Grease Automotive and Artillery.		
a.	Lubricate the Four Wheel Axel Assemblies.		X
b.	Lubricate the Two Front Swivel Axle Assemblies.		X

## Repair

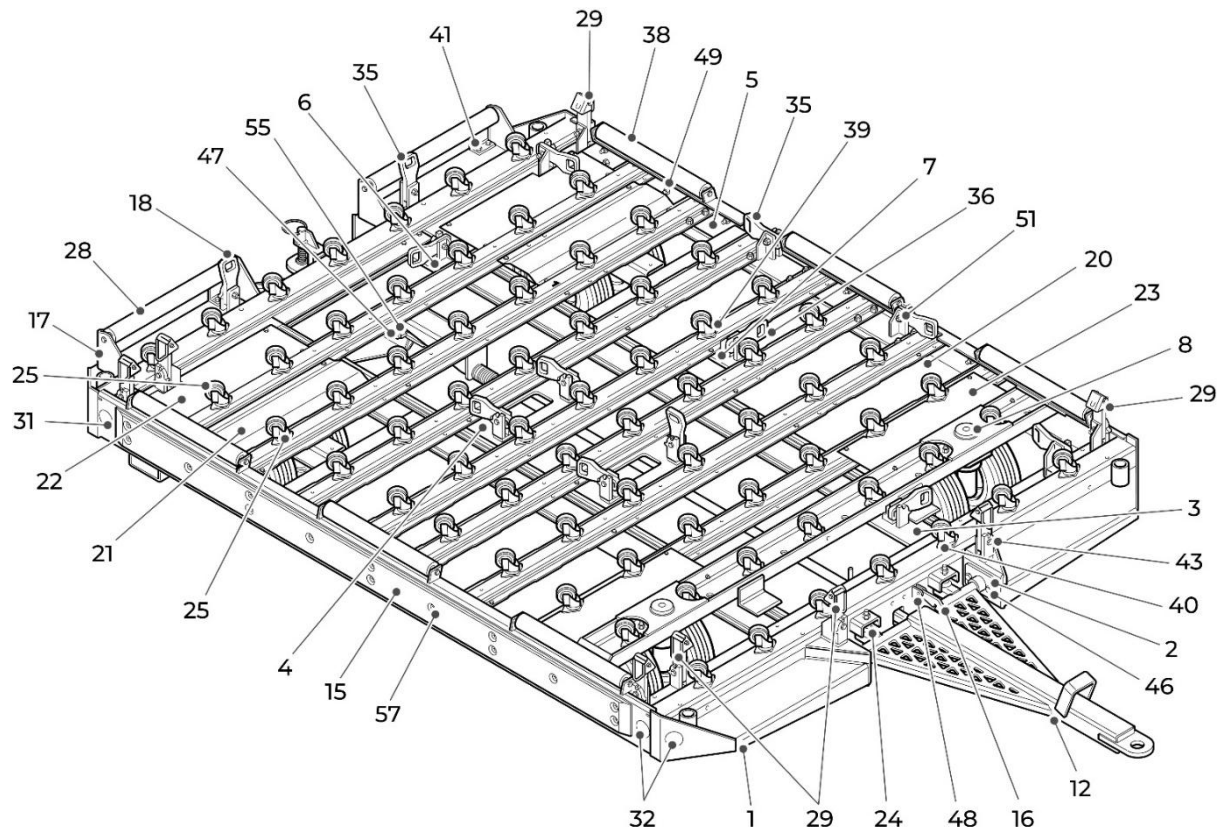
Repairs to the PCT600OC Universal Pallet Container Dolly should be carried out by directly replacing any faulty or damaged components. The Exploded Parts View illustrations provide a clear visual reference for all components, along with guidance on how the dolly can be dismantled and reassembled. Each part is listed in the Parts Breakdown List, and the reference numbers in the illustrations are keyed to this list for easy identification.

 Replacement parts should be sourced directly from Avro GSE. The use of major components that are not obtained from Avro GSE will result in the warranty being voided.

 It is expected that replacement fasteners may be sourced locally. If sourcing fasteners locally, make sure that the replacement fasteners are the same type and grade of material, and have the same protective coating, as the original. The Parts Breakdown List specifies the required material and finish.

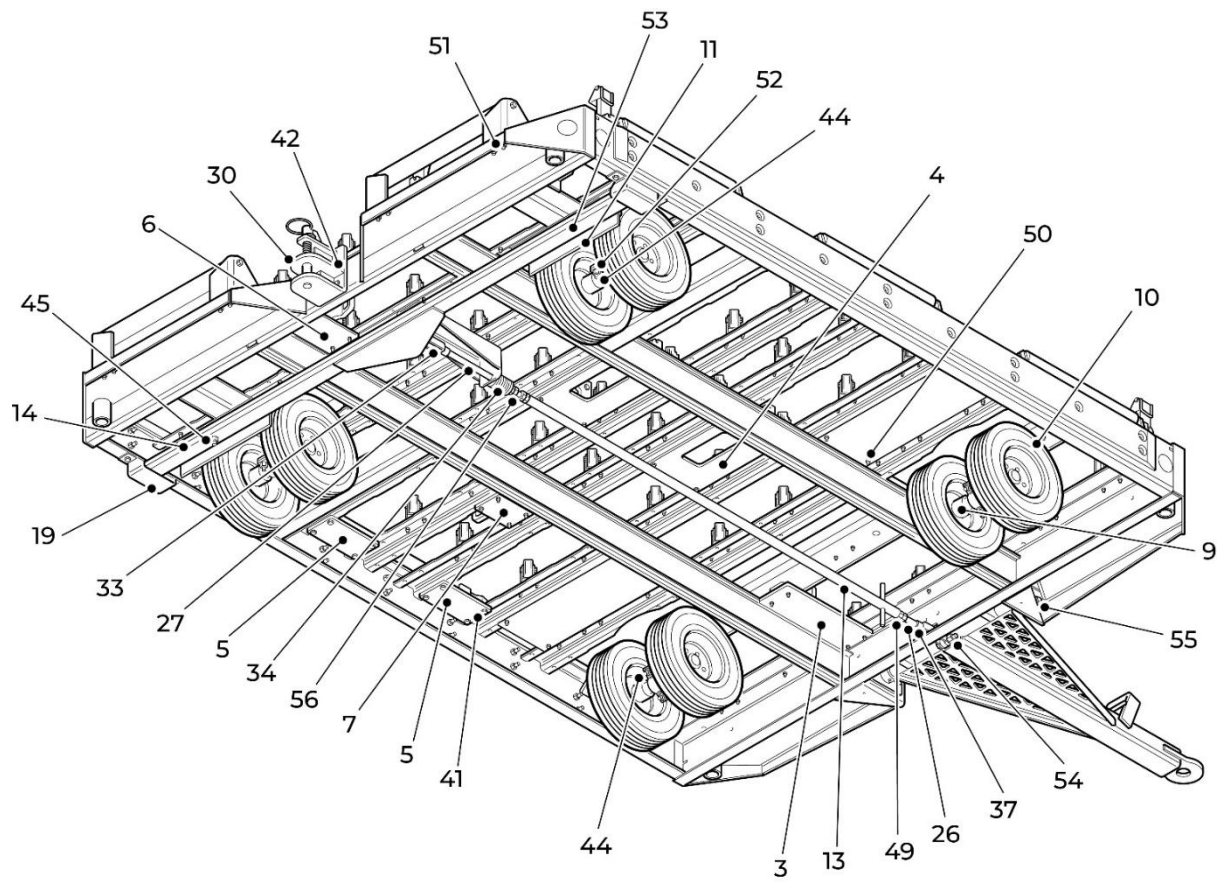
## Parts View

### Top View



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Bottom View



## Parts List

Only components weighing 1 kg or more are listed with their weights in the table below.

Item	Part No.	Description	Qty	Weight per item (kg)
1	PRNP00404	Main Frame Assembly	1	654.0
2	PRNP00026	Tow Bar Mounting Assembly	2	2.0
3	PRNP00023	Front LD8 Stop Support	1	9.0
4	PRNP00021	LD1,2,3 Stop Support	2	11.0
5	PRNP00018	Hood Stop Support	2	4.0
6	PRNP00022	LD8 Stop Support	1	5.0
7	PRNP00020	Middle Stop Support	1	3.0
8	PRNP00007	Front Swivel Axle Assembly	2	10.0
9	PRNP00024	Wheel Axle Assembly	4	35.0
10	PRNP00003	Solid Tire with Rim	8	11.4
11	PRNP00005	Brake Shoe Assembly	2	4.0
12	PRNP00008	Tow Bar	1	34.8
13	PRNP00006	Brake Line Linkage	1	5.1
14	PRNP00033	Brake Bar Assembly	1	28.0
15		Side Bumper	2	7.1
16	PRNP00004	Towbar Latch	1	-
17		Right Rear Roller Bracket	2	3.1
18		Left Rear Roller Bracket	2	3.1
19		Brake Bar Bracket	2	1.0
20		Front Splash Guard	2	-
21		Rear Over Wheel Splash Guard	2	-
22		Rear Splash Guard	2	-
23		Front Over Wheel Splash Guard	2	-
24	PRNP00035	Towbar Adjustable Stop	2	-
25	PRNP00002	Swivel Castor	70	-
26	PRNP00029	Left-Hand Threaded Rod	1	-
27	PRNP00034	Threaded Rod	1	1.2
28	PRNP00016	Roller – Rear	2	4.5
29	PRNP00018	Hood Spring Stop	8	2.0

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Item	Part No.	Description	Qty	Weight per item (kg)
30	PRNP00036	e-Hitch	1	11.0
31	PRNP00031	Reflective Sticker, Red, plastic, 3" Dia.	4	-
32	PRNP00030	Reflective Sticker, Yellow, plastic, 3" Dia.	4	-
33	PRNP00028	Forged Yoke, 3/4", Right-Hand Thread	1	3.4
34	PRNP00015	Brake Line Spring	1	1.3
35	PRNP00019	Bent Handle Stop	12	1.4
36	PRNP00020	Straight Handle Stop	1	1.4
37	PRNP00027	Forged Yoke, 3/4", Left-Hand Thread	1	3.4
38	PRNP00017	Roller - Side	6	3.1
39		Hex Bolt - 5/16-18 X 1" - Zinc Plated, SAE Grade 8	176	-
40		Hex Bolt - 5/16-18 X 2-3/4" - Zinc Plated, SAE Grade 8	4	-
41		Hex Bolt - 1/2-13 X 1-1/2" - Zinc Plated, SAE Grade 8	24	-
42		Hex Bolt - 1/2-13 X 2-1/2" - Zinc Plated, SAE Grade 8	4	-
43		Hex Bolt - 1/2-13 X 2-3/4" - Zinc Plated, SAE Grade 8	21	-
44		Hex Bolt - 9/16-12 X 2" - Zinc Plated, SAE Grade 8	24	-
45		Hex Bolt - 5/8-11 X 3" - Zinc Plated, SAE Grade 8	2	-
46		Hex Bolt - 3/4-10 X 2" - Zinc Plated, SAE Grade 8	4	-
47		Hex Bolt - 3/4-10 X 3" - Zinc Plated, SAE Grade 8	2	-
48		Hex Bolt - 5/16-18 X 1-1/2" - Zinc Plated, SAE Grade 8	9	-
49		Hex Nut - 3/4-10 - Zinc Plated, SAE Grade 8	4	-
50		Nut, NYLOCK, Self-Locking - 5/16-18 - Zinc Plated, SAE Grade 8	189	-
51		Nut, NYLOCK, Self-Locking - 1/2-13 - Zinc Plated, SAE Grade 8	85	-
52		NUT, NYLOCK, Self-Locking - 9/16-12 - Zinc Plated, SAE Grade 8	24	-

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Item	Part No.	Description	Qty	Weight per item (kg)
53		Nut, NYLOCK, Self-Locking - 5/8-11 - Zinc Plated, SAE Grade 8	2	-
54		Nut, NYLOCK, Self-Locking - 3/4-10 - Zinc Plated, SAE Grade 8	1	-
55		Nut, NYLOCK, Self-Locking - 3/4-10 - Zinc Plated, SAE Grade 8	5	-
56		Washer, Flat, Wide - 3/4" - Zinc Plated, Carbon Steel	2	-
57		Socket Head Cap Screw 0.5 - 13x2x2-HX-N	36	-




## Torque Reference Table

This table is used only when specific torques are not available.


This table refers to both metric and imperial Lubricated (WET), Not Lubricated (DRY) and includes fastener conversion chart.

# TIGHTENING TORQUE REFERENCE CHART FOR SAE AND METRIC BOLTS


NL = Not Lubricated  
L = Lubricated  
1 lbs ft = 1.356 N\*M

  
Grade 4 8/16 SAE  
Tensile: 60,000 psi


=

  
Grade 2  
Tensile: 60,000 psi


=

  
Grade 8.8  
Tensile: 120,350 psi


=

  
Grade 5  
Tensile: 120,000 psi


=

  
Grade 10.9  
Tensile: 150,000 psi

=

  
Grade 8  
Tensile: 150,000 psi

=

  
Grade 12.9  
Tensile: 170,900 psi

HEX KEY INTERCHANGE

SAE	Metric
5/64	2
3/32	2.5
7/64	3
1/8	3.5
5/32	4
3/16	5
7/32	6
1/4	7
5/16	8
3/8	10

TIGHTENING TORQUE FOR SAE BOLTS (80% of yield strength Sy) in lbs ft

MATERIAL	UNC	1/4"-20	5/16"-18	3/8"-16	7/16"-14	1/2"-13	9/16"-12	5/8"-11	3/4"-10	7/8"-9	1"-8	1 1/8"-7	1 1/4"-7	1 3/8"-6	1 1/2"-6
GRADE 1	NL	4	8	14	22	34	49	68	120	194	291	412	581	762	1012
	L	3	6	10	17	26	37	51	90	145	218	309	436	572	759
GRADE 2	NL	6	12	22	35	54	78	107	191	291	412	581	762	1012	
	L	5	9	17	27	40	58	81	143	218	309	436	572	759	
GRADE 5/5.2	NL	10	20	36	57	87	126	173	308	496	743	1053	1486	1948	2586
	L	7	15	27	43	65	94	130	231	372	557	790	1114	1461	1939
GRADE 8	NL	14	28	50	81	123	177	245	435	700	1050	1488	2100	2752	3654
	L	10	21	38	60	92	133	184	326	525	787	1116	1575	2064	2740
MATERIAL	UNF	1/4"-28	5/16"-24	3/8"-24	7/16"-20	1/2"-20	9/16"-18	5/8"-18	3/4"-16	7/8"-14	1"-14	1 1/8"-12	1 1/4"-12	1 3/8"-12	1 1/2"-12
GRADE 1	NL	4	9	16	25	38	55	77	134	214	326	462	644	868	1138
	L	3	7	12	19	29	41	58	101	160	245	347	483	651	854
GRADE 2	NL	7	14	25	39	61	87	122	213	347	525	743	1012	1338	
	L	5	10	19	30	46	65	91	159	260	396	564	782	1038	
GRADE 5/5.2	NL	11	22	40	64	98	140	196	343	547	834	1181	1645	2217	2909
	L	8	17	30	48	74	105	147	257	410	625	886	1234	1663	2182
GRADE 8	NL	16	31	57	90	139	198	277	485	773	1178	1699	2325	3133	4111
	L	12	24	43	68	104	148	208	364	580	884	1251	1744	2350	3083

TIGHTENING TORQUE FOR METRIC BOLTS (80% of yield strength Sy) in lbs ft

MATERIAL	ST. PITCH	M6-1	M8-1.25	M10-1.5	M12-1.75	M14-2	M16-2	M18-2.5	M20-2.5	M22-2.5	M24-3	M27-3	M30-3.5	M33-3.5	M36-4
CLASS 4.6	NL	3	8	16	29	46	71	98	139	189	240	351	477	649	833
	L	3	6	12	21	34	53	74	104	142	180	263	357	486	625
CLASS 8.8	NL	9	22	44	76	122	190	262	370	503	640	936	1271	1730	2221
	L	7	17	33	57	91	142	197	278	378	480	702	953	1297	1666
CLASS 10.9	NL	13	32	64	112	179	279	385	544	739	940	1375	1867	2540	3233
	L	10	24	48	84	134	209	289	408	555	705	1031	1400	1905	2447
CLASS 12.9	NL	16	38	75	131	209	326	451	636	865	1100	1609	2185	2973	3818
	L	12	29	56	98	157	245	338	477	649	825	1207	1639	2230	2863
MATERIAL	FINE PITCH	M6-0.75	M8-1	M10-1	M12-1.25	M14-1.5	M16-1.5	M18-1.5	M20-1.5	M22-1.5	M24-1.5	M27-1.5	M30-1.5	M33-1.5	M36-1.5
CLASS 4.6	NL	4	9	18	31	50	76	110	154	207	273	393	545	733	958
	L	3	7	14	23	37	57	83	116	156	204	295	409	550	719
CLASS 8.8	NL	10	24	49	83	132	202	294	411	553	727	1048	1455	1954	2556
	L	7	18	37	63	99	151	220	308	415	545	786	1091	1466	1917
CLASS 10.9	NL	15	35	72	123	194	296	431	603	813	1068	1539	2136	2870	3754
	L	11	26	54	92	146	222	323	453	610	801	1155	1602	2152	2815
CLASS 12.9	NL	17	41	84	143	227	347	505	706	951	1249	1802	2500	3358	4393
	L	13	31	63	108	170	260	379	530	713	937	1351	1875	2519	3295

HEX KEY INTERCHANGE	
SAE	Metric
5/64	2
3/32	2.5
7/64	3
1/8	3.5
5/32	4
3/16	5
7/32	6
1/4	7
5/16	8
3/8	10

## Standard Conversion Table

Standard conversion factors and terms related to this vehicle

Length				
Kilometers (km)	x	0.62	=	Miles (mi)
Miles (mi)	x	1.61	=	Kilometers (km)
Kilometers (km)	x	3280.8	=	Feet (ft)
Feet (ft)	x	.0003048	=	Kilometers (km)
Meters (m)	x	3.28	=	Feet (ft)
Feet (ft)	x	0.3	=	Meters (m)
Centimeters (cm)	x	0.39	=	Inches (in)
Inches (in)	x	2.54	=	Centimeters (cm)
Millimeters (mm)	x	0.039	=	Inches (in)
Inches (in)	x	25.4	=	Millimeters (mm)
Meters (m)	x	39.37	=	Inches (in)
Inches (in)	x	0.0254	=	Meters (m)
Meters (m)	x	1.09361	=	Yards (yd)
Yards (yd)	x	0.91	=	Meters (m)
Kilometers (km)	x	1093.61	=	Yards (yd)
Yards (yd)	x	0.00091	=	Kilometers (km)
Temperature				
Fahrenheit (F)	(Temperature (F) - 32)*(5/9)			Celsius (C)
Celsius (C)	(Temperature (C)*(9/5)+32)			Fahrenheit (F)
Volume				
Liters (L)	x	1.057	=	Quarts (qt)
Quarts (qt)	x	0.95	=	Liters (L)
Liters (L)	x	0.264	=	Gallons (gal)
Gallons (gal)	x	3.785	=	Liters (L)
Milliliters (ml)	x	0.0042	=	Cups (c)
Cups (c)	x	236.6	=	Milliliters (ml)
Milliliters (ml)	x	0.0338	=	Ounces (oz)
Ounces (oz)	x	29.57	=	Milliliters (ml)
Mass				
Kilograms (kg)	x	0.0011	=	Tons (ton)
Tons (ton)	x	907.18	=	Kilograms (kg)
Kilograms (kg)	x	2.2046	=	Pounds(lb)
Pounds(lb)	x	0.454	=	Kilograms (kg)
Grams (g)	x	0.035	=	Ounces (oz)
Ounces (oz)	x	28.35	=	Grams (g)
Grams (g)	x	0.002205	=	Pounds (lb)
Pounds (lb)	x	453.592	=	Grams (g)
Milligrams (mg)	x	0.000035	=	Ounces (oz)
Ounces (oz)	x	28350	=	Milligrams (mg)



## Pressure And Torque Conversion Table

### CONVERSION TABLES

#### CONVERSION TABLES

##### UNITS OF PRESSURE

1 ATM=1 BAR=105 PA=14.4 PSI

##### UNIT OF WEIGHT

	N	daN	kN	kg	lbs
1N	1	0,1	0,001	0,102	0,225
1daN	10	1	0,01	1,02	2,25
1kN	1000	100	1	102	225
1kg	9,81	0,981	0,00981	1	2,205

##### UNITS OF TORQUE

	N-m	daN-m	kN-m	kg-m	lb-in
1N-m	1	0,1	0,001	0,102	8,854
1daN-m	10	1	0,01	1,02	88,54
1kN-m	1000	100	1	102	8854
1kg-m	9,81	0,981	0,00981	1	86,8
1 lb-in	0,1129	0,01129	0,0001129	0,01152	1

## Notes

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