Clinical Practice Procedures:
Trauma/Abdominal Aortic and Junctional Tourniquet (pilot)

Policy code	CPP_TR_AAJT_0924
Date	September, 2024
Purpose	To ensure a consistent procedural approach for Abdominal Aortic and Junctional Tourniquet.
Scope	Applies to Queensland Ambulance Service (QAS) clinical staff.
Health care setting	Pre-hospital assessment and treatment.
Population	Applies to all ages unless stated otherwise.
Source of funding	Internal – 100%
Author	Clinical Quality & Patient Safety Unit, QAS
Review date	September, 2027
Information security	UNCLASSIFIED – Queensland Government Information Security Classification Framework.
URL	https://ambulance.qld.gov.au/clinical.html

While the QAS has attempted to contact all copyright owners, this has not always been possible. The QAS would welcome notification from any copyright holder who has been omitted or incorrectly acknowledged.

All feedback and suggestions are welcome. Please forward to: Clinical.Guidelines@ambulance.qld.gov.au

Disclaimer

The Digital Clinical Practice Manual is expressly intended for use by appropriately qualified QAS clinicians when performing duties and delivering ambulance services for, and on behalf of, the QAS.

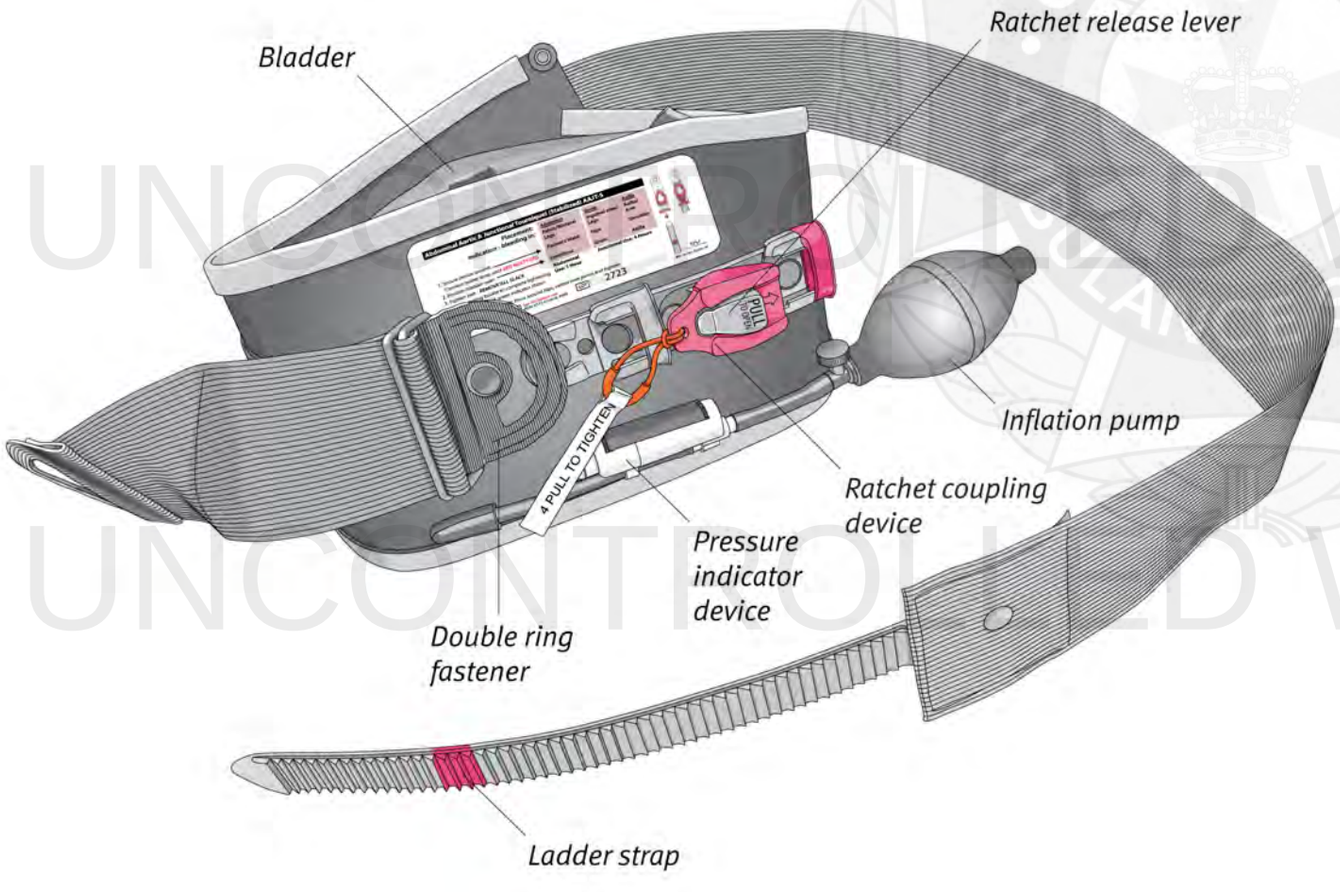
The QAS disclaims, to the maximum extent permitted by law, all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs incurred for any reason associated with the use of this manual, including the materials within or referred to throughout this document being in any way inaccurate, out of context, incomplete or unavailable.

Abdominal Aortic and Junctional Tourniquet (pilot)

September, 2024

The **Abdominal Aortic and Junctional Tourniquet – Stabilised (AAJT-S)** is designed to stop or significantly slow massive bleeding in the junctional regions of the body or pelvis, preserving blood flow to the vital organs. These areas constitute a particularly difficult problem for pre-hospital trauma care providers as they can result in large blood losses that can be difficult to control.

The two applications endorsed for use of the AAJT-S by suitably trained and authorised QAS clinicians are haemorrhage from the abdominal and axillar regions. Application is not limited by the age of the patient but by their size. It may be used on any patient on which the device can be properly fitted. The procedures for applying the AAJT-S to each of these locations are detailed below.



Abdominal haemorrhage

When applied to the abdominal region, the specially designed bladder is inflated to compress and occlude blood flow through the abdominal aorta, and it is claimed to achieve similar results to performing a Zone 3 REBOA.[1] The AAJT-S can be easily and quickly applied by a single clinician to control bleeding from incompressible abdominal bleeding, and can be maintained in this position for up to one hour.[2]

Indications

- Haemorrhage from non-compressible injuries to the abdominal cavity

Contraindications

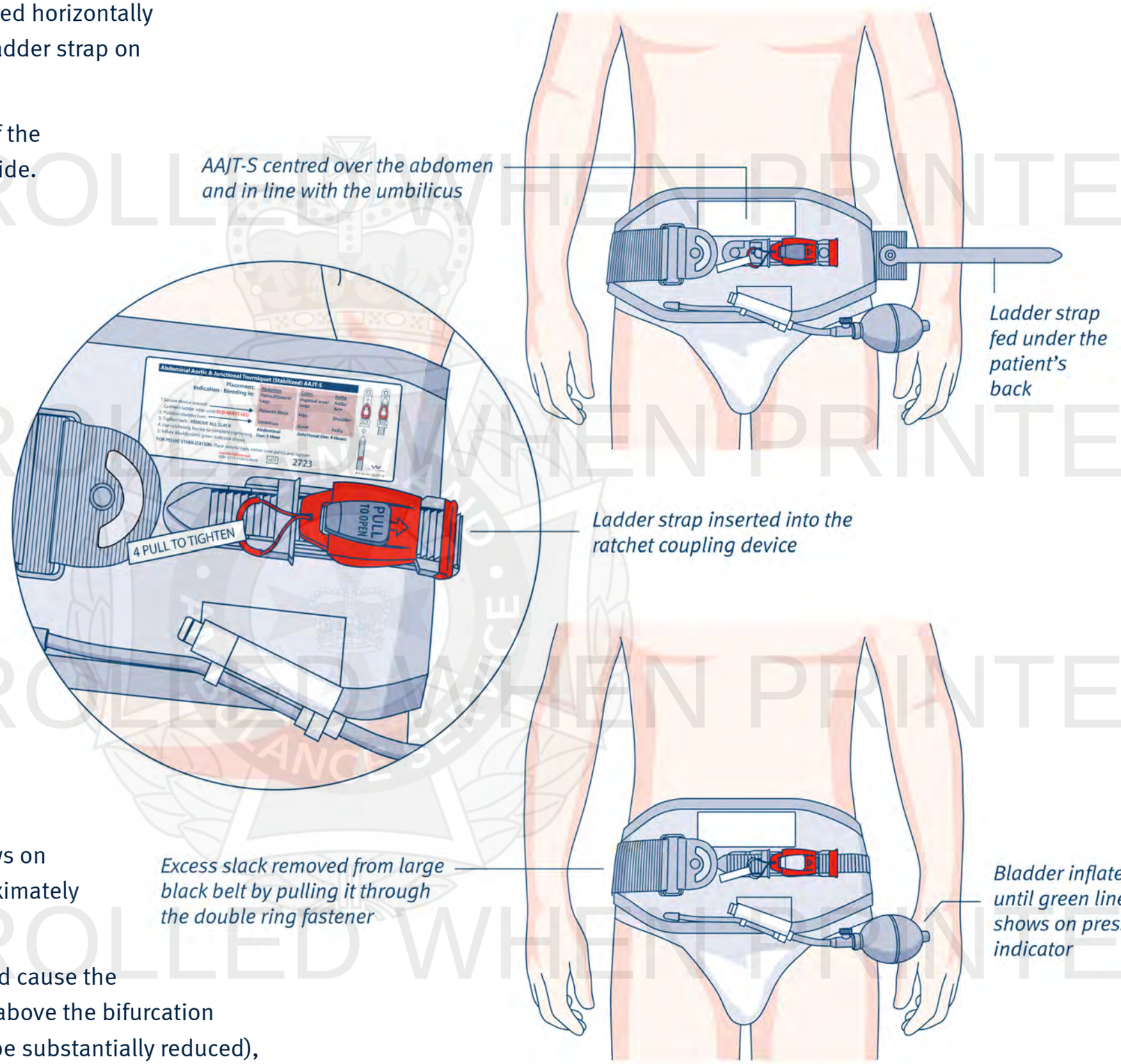
- Known abdominal aortic aneurysm and pregnancy

Complications

- Compression induced injuries

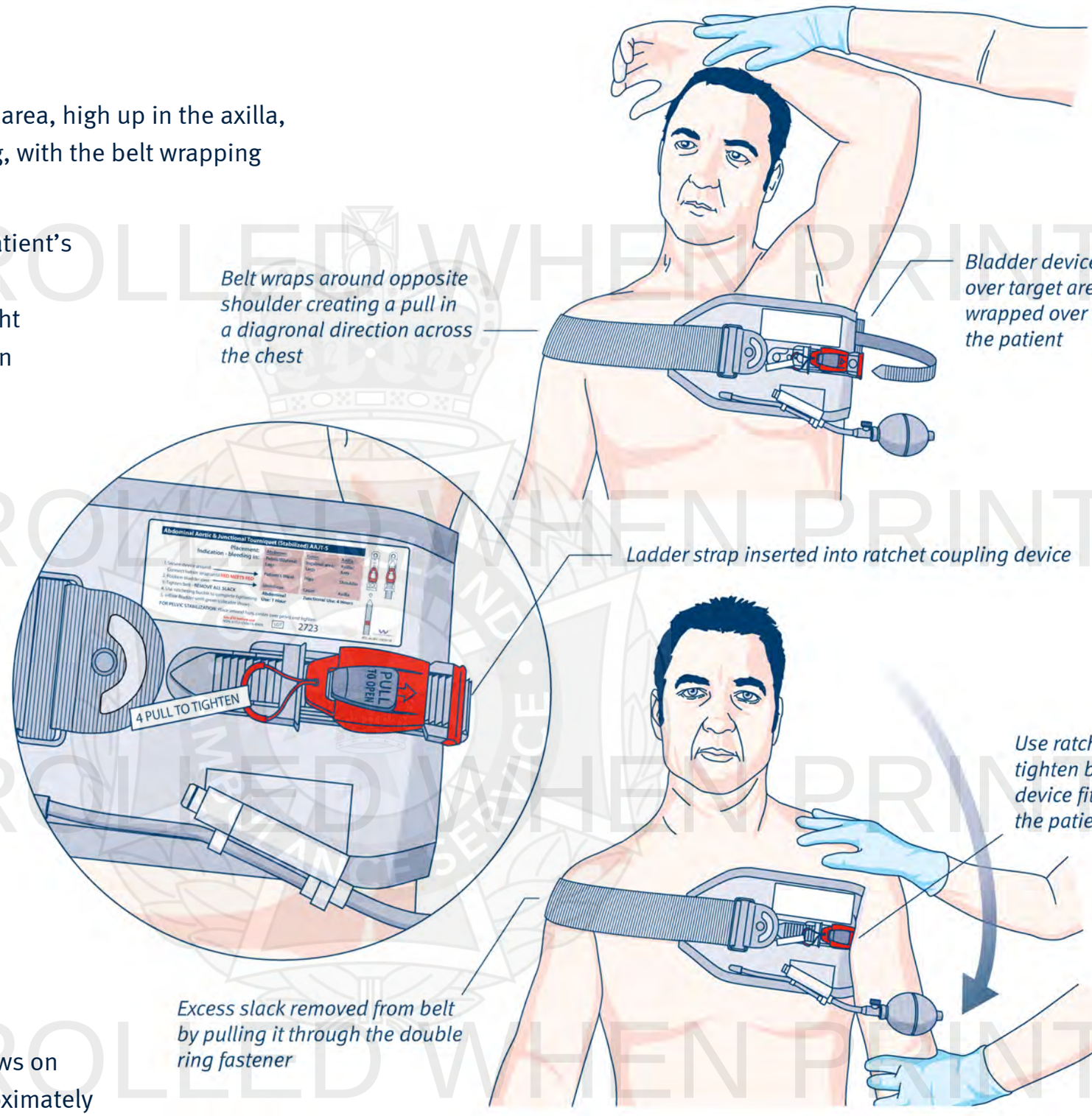
PROCEDURE (Abdominal haemorrhage)

1. Place the AAJT-S over the abdomen, centred horizontally and in line with the umbilicus, with the ladder strap on the same side as the clinician.
2. Feed the ladder strap under the hollow of the patient's back and through to the other side.
3. Insert the end of the ladder strap into the corresponding ratchet coupling device, red to red.
4. Check that the bladder is positioned centrally, and in line with the umbilicus.
5. Remove all the excess slack from the large black belt by pulling it through the double ring fastener in an upward (vertical) direction.
6. Use the ratcheting buckle to tighten the bladder strap (approximately 5 full ratcheting actions) until the device sits firmly around the patient. It should be difficult to insert your fingers between the device and the patient.
7. Inflate the bladder until the green line shows on the pressure indicator device (this is approximately 250 mmHg of pressure).
8. If properly fitted, the inflated bladder should cause the occlusion of the inferior descending aorta, above the bifurcation point. Haemorrhage flow should cease (or be substantially reduced), and lower limb pulses should be absent.



PROCEDURE (Axillar haemorrhage)

1. Place the device over the upper torso.
2. Position the bladder device over the target area, high up in the axilla, on the side where the bleeding is occurring, with the belt wrapping over the front of the patient.
3. The belt wraps around the outsideof the patient's opposite arm, high up on the shoulder and around their back. The device sits on a slight angle, creating a pull in a diagonal direction across the chest.
4. Insert the end of the ladder strap into the corresponding ratchet coupling device, red to red.
5. Remove all the excess slack from the belt by pulling the excess through the double ring fastener.
6. Use the ratcheting buckle to tighten the bladder strap (approximately 5 full ratcheting actions) in a downward direction until the device sits firmly around the patient. It should be difficult to insert your fingers between the device and the patient. The downward ratcheting direction helps position the bladder into the axilla, not over the chest.
7. Inflate the bladder until the green line shows on the pressure indicator device (this is approximately 250 mmHg of pressure).
8. If properly fitted, the inflated bladder should cause the occlusion of the axillary artery. Haemorrhage flow should cease (or be substantially reduced), and the radial pulse should be absent on that side.



Additional information

- When fitted to control abdominal haemorrhage the device may be maintained in this position for up to 1 hour.[3]
- When fitted to control axillar haemorrhage the device may be maintained in this position for up to 4 hours.

AAJT-S fitting instruction videos

Aeromedical information

- Clinicians are required to monitor the pressure indicator and adjust the bladder pressure as necessary, to ensure the green pressure marker is visible at all times.

Removal instructions

- **Warning:** Bleeding will resume if the device is removed.
- Once fitted, the device should only be removed after the patient is stabilised, e.g., by application of REBOA, or, once the patient is in theatre undergoing surgery.

1. Deflate the bladder by turning the valve on the inflation pump slowly counter-clockwise to release the pressure.
2. Release the ladder strap by lifting the black centre release lever and withdraw the ladder strap.

UNCONTROLLED WHEN PRINTED
UNCONTROLLED WHEN PRINTED
UNCONTROLLED WHEN PRINTED