



# Pretensioning Seat Belt Fitting Instructions

This restraint system has been designed and manufactured in Australia to "Keep you safe". APV-S is the major original equipment supplier of seat belts in Australia and strives to present the best products in quality and performance. This seatbelt is suitable for driver or front passenger side seating locations of passenger cars with airbags.

## WHAT IS A PRETENSIONER AND HOW DOES IT WORK?

A pretensioner is a device that helps to tighten the seat belts in a vehicle during a collision or sudden stop. It works by using a small pyrotechnic charge to quickly tighten the seat belts, holding the passengers securely in place and helping to reduce the risk of injury. This charge is ignited in conjunction with the airbags by the vehicle computer. The retractor has a load limiting function, which helps to prevent excessive force from being applied to the passengers in a collision.

## HOW TO WEAR YOUR SEATBELT CORRECTLY

To "Buckle Up" slide the tongue into the slot at the open end of the buckle. It is correctly engaged when you hear a positive "click". To release the belt, push red the button in the centre of the buckle.

To wear your seatbelt correctly, first adjust the lap portion of the belt so that it fits snugly across your hips. The belt should be low and snug across your pelvis, not across your stomach. Then, adjust the shoulder portion of the belt so that it fits comfortably across your chest and shoulder.

The shoulder belt should not be twisted or tangled, and it should not be resting on your neck or face. It's important to make sure that the seatbelt is properly adjusted and fastened before starting to drive, and to keep it on for the entire duration of the trip.

## THE EMERGENCY LOCKING RETRACTOR SEAT BELT

The Emergency Locking Retractor locks when either:

1. Webbing is withdrawn quickly from the retractor.
2. The retractor sensors rapid acceleration or deceleration.
3. The retractor is tilted more than approximately 15° in any direction from the design angle.

## HOW TO UNLOCK THE RETRACTOR

To unlock the retractor, first ensure it is angled correctly then:

1. Pull the webbing firmly to remove slack on the spool.
2. Allow the retractor to retract ~20mm.
3. Slowly withdraw webbing from the retractor.

The retractor must be orientated with the webbing coming out vertically, as if mounted in the vehicle during this entire process. For best results, place the retractor in a bench vice or on the side of a table, bench, or cabinet for stability.

## WARNING!

Pretensioning seatbelt retractors use a live pyrotechnic to rapidly tighten the webbing in an accident. Familiarise yourself with the MSDS before handling the device. Please have the assembly installed by trained restraint fitter or automotive engineer/mechanic.

## WARNING!

- Read the whole of the instructions for installation carefully and to consult the seat belt manufacturer in the event of doubt as to the method of installation.
- Do not anchor seat belts to unsound metal structures, to wooden or plastic structures or to seats (unless the vehicle has been provided with seat belt anchors on the seat).
- Webbing must not be allowed to chafe against sharp edges on seat or bodywork.
- Do not make any alterations or additions to the belt.
- Do not attach this seat belt to child restraint anchor provided in the vehicle.
- No modifications or additions should be made by the user which will either prevent the seat belt adjustment devices from operating to remove slack, or prevent the seat belt assembly being adjusted to remove slack.

## WARNING!

FOR THE FULL BENEFIT FROM THIS SEAT BELT:

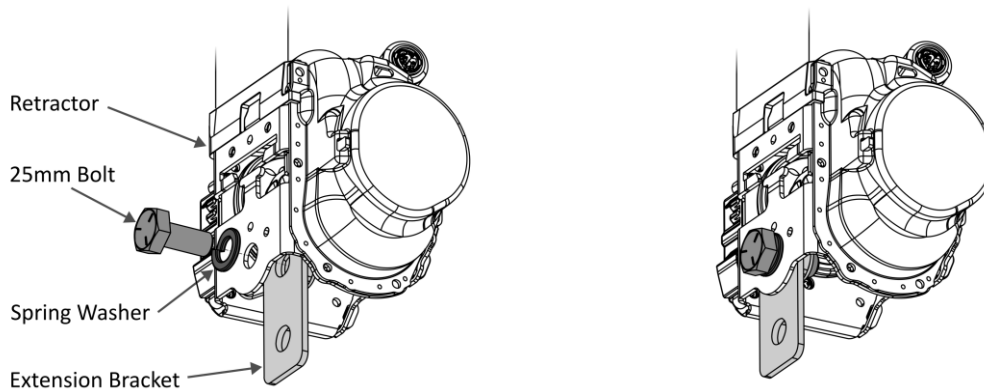
- IT MUST BE FIRMLY ADJUSTED
- IT MUST NOT BE TWISTED
- THE LAP SECTION MUST BE WORN ACROSS THE HIPS
- THE BUCKLE MUST BE LOCATED AT OR BELOW THE WEARER'S HIP
- EACH SEAT BELT MUST ONLY RESTRAIN ONE OCCUPANT
- CLEAN ONLY WITH A DAMP CLOTH.

## WARNING!

REPLACE THE SEAT BELT ASSEMBLY WHEN IT HAS BEEN USED IN A SEVERE ACCIDENT OR SHOWS SIGNS OF SEVERE FRAYING OR HAVING BEEN CUT; OR IF IT COMES INTO CONTACT WITH CHEMICALS; OR WHEN, WITH A BELT FITTED WITH A VISUAL OVERLOAD INDICATOR, IT INDICATES THE UNSUITABILITY OF THE BELT FOR FURTHER USE; OR WHEN A SEAT BELT IS EQUIPPED WITH A PRE-LOADING DEVICE, WHEN THE LATTER HAS BEEN ACTIVATED.

## SEAT BELT INSTALLATION

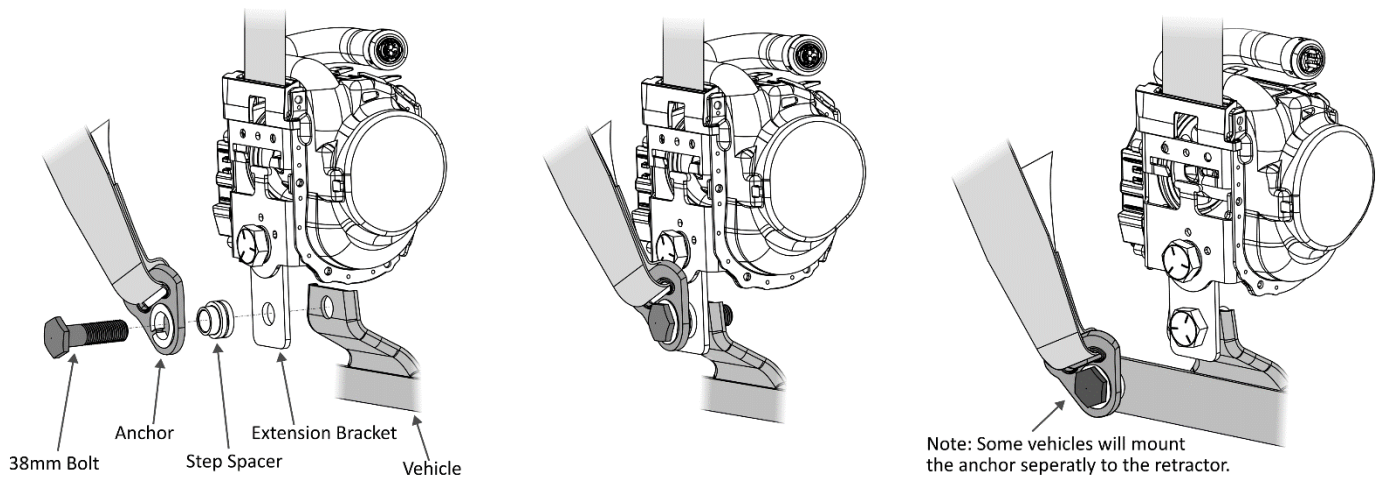
1. Place the retractor in the vehicle mounting point and determine whether an extension bracket is required to fit correctly. If required, bolt the extension bracket to the retractor.



Note: Extension bracket is not supplied in all kits. If your vehicle needs an extension bracket and the corresponding kit does not include it, please contact APV.

Note: Certain vehicles will require an APV K4425 Multifit Bracket kit (sold separately) to mount the retractor.

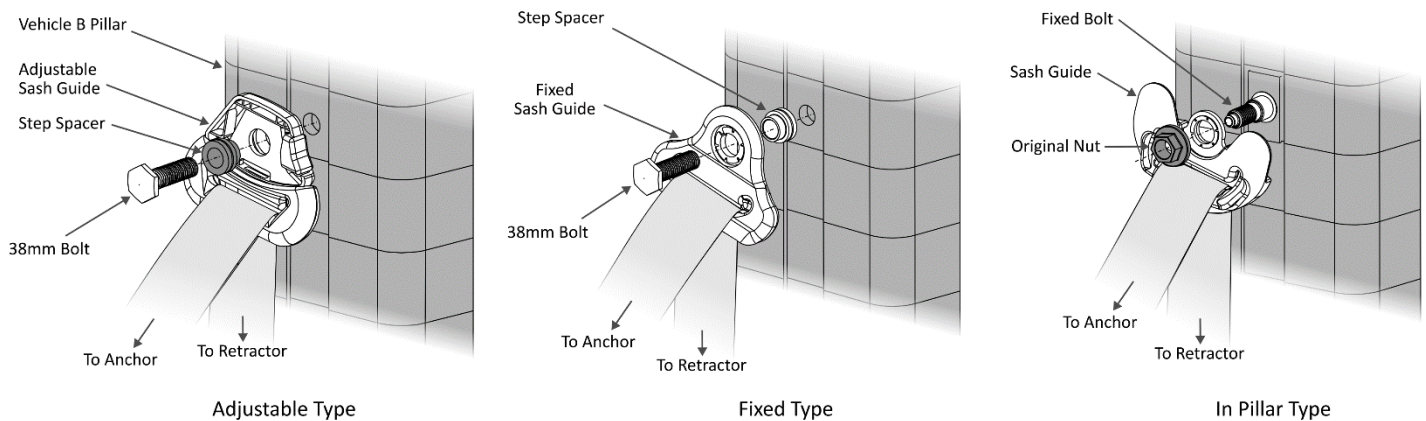
2. Hand tighten the retractor and anchor to the vehicle. Ensure the retractor is pointing vertically.



Note: The vehicle may have alignment tabs that can be bent out the way so that the bracket sits flush.

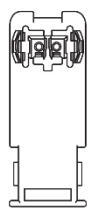
Note: The OEM retractor may have a second upper mounting point used for alignment in a high-volume manufacturing environment. This is not load bearing and not required.

3. Remove all twists from the webbing and bolt the Sash Guide to the Vehicle B Pillar.

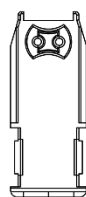


## RETRACTOR ELECTRICAL CONNECTOR INSTALLATION

4. Ensure the vehicle battery is disconnected!
5. Check which pretensioner connector your vehicle has:



Standard Connector  
(AK1 Type)



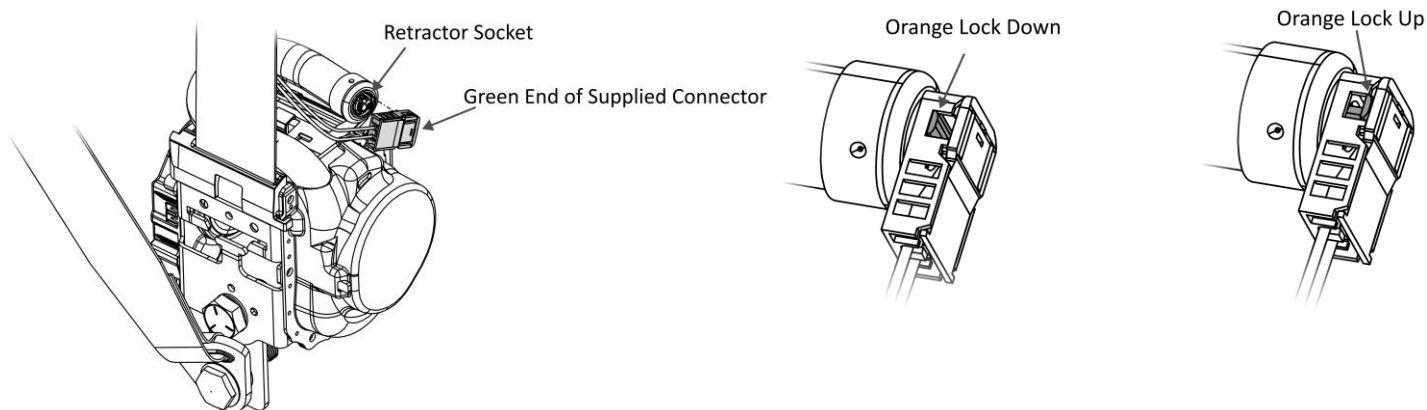
Alternate Connector  
(10mm Type)

The retractor is supplied with the connector/adaptor cable that matches the standard (AK1 type) connector. If your vehicle matches this connector, continue to Step 7.

If your vehicle has the alternate connector (10mm type), follow Step 6 to swap the connector.

### 6. IF ALTERNATE ELECTRICAL ADAPTOR IS REQUIRED:

- a. Remove the existing adaptor by 1<sup>st</sup> moving the orange lock up, then pulling the green connector from the retractor.
- b. Clip the green end of the alternate adaptor to the retractor.



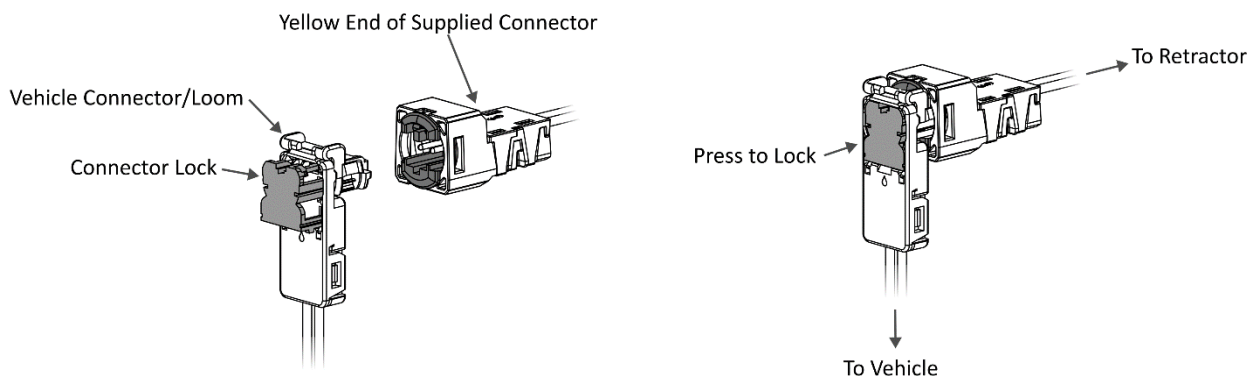
Ensure the locking features (coloured orange) are down and the connector is secure. Zip tie the wires if required.

Note: The alternate electrical adaptor is only included in certain APV kits. If your vehicle requires this adaptor but it was not included, please contact APV.

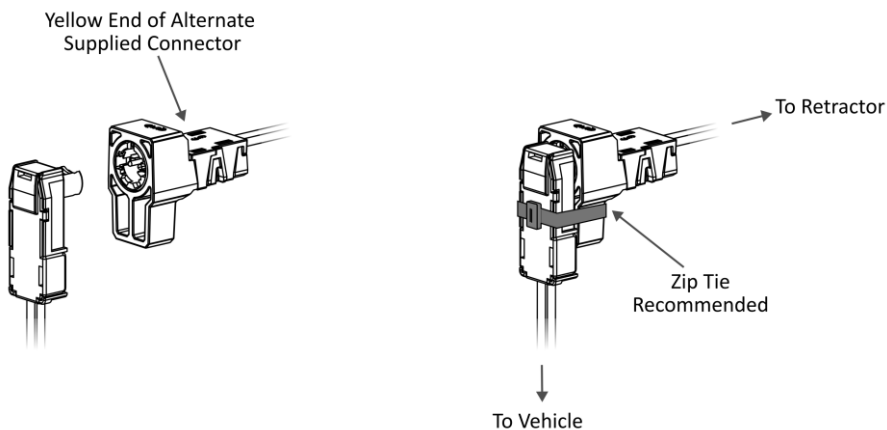
**WARNING: RISK OF ELECTROSTATIC DISCHARGE ACTIVATING PRETENSIONER WHEN ADAPTOR IS REMOVED FROM RETRACTOR. TAKE NECESSARY STEPS TO GROUND YOURSELF AND THE RETRACTOR BEFORE PERFORMING STEP 6.**

7. Connect the yellow end of the connector to the vehicle loom.

### STANDARD CONNECTOR:



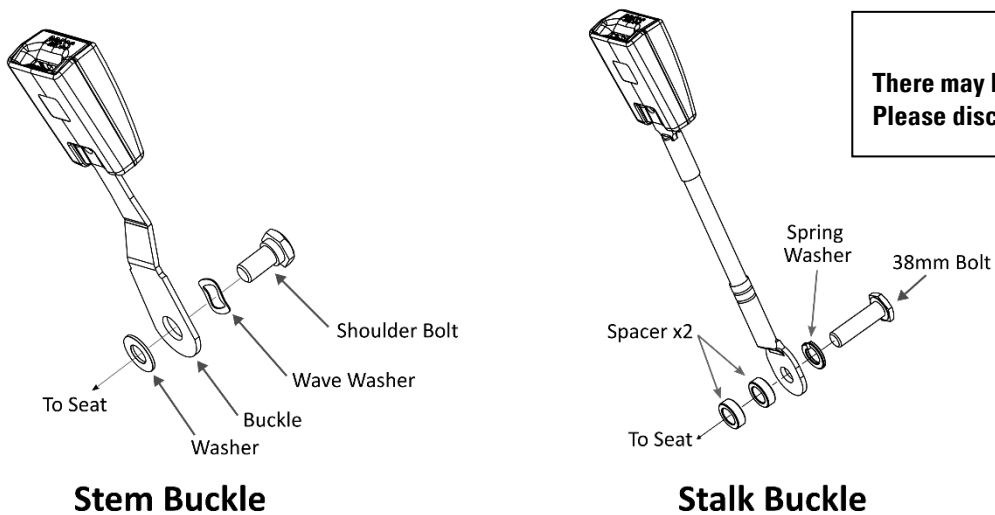
### ALTERNATE CONNECTOR:



Note: The alternate connector does not have a locking feature. To ensure a robust connection, the APV adaptor for this connector is shaped in a way to allow a zip tie to be added.

### BUCKLE INSTALLATION

Thread the provided fittings as depicted below and bolt to the seat at the desired angle. Tighten the bolt to 35-40Nm.



#### NOTE

There may be more fittings than needed.  
Please discard unused fittings.

### FINAL CHECKS

1. Reconnect the battery, turn on the ignition and confirm that the airbag light does not turn on.
2. Check that the seatbelt unwinds, retracts, and locks when pulled quickly.
3. Tighten all bolts to 35-40Nm.

## ELECTRIC BUCKLE LOOM CONNECTIVITY & INSTALLATION (ELECTRIC KITS ONLY)

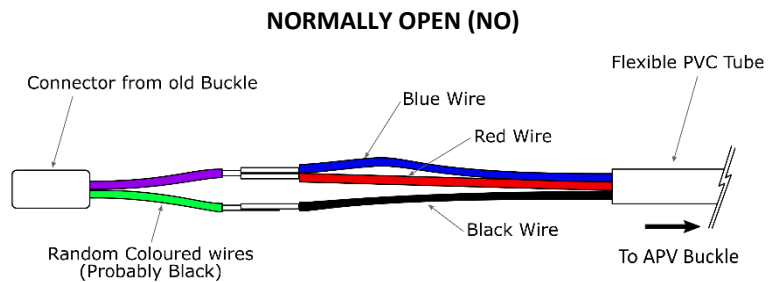
These instructions are a generic guide only and should be completed by a qualified Auto Electrician. Ensure you read the instructions completely before starting. APV are in no way liable for the accuracy of these instructions or your actions in following them. You will need a collection of tools and materials to splice wires (cut, strip, join & insulate), these are not included.

These instructions assume that your vehicle uses a two-wire connectivity to determine the seat belt buckles state (fastened or unfastened) and operates an alarm, warning or lockout system based on this connectivity. A two-wire system will be configured using either a Normally Open (NO) or Normally Closed (NC) circuit.

1. Remove the old buckle from the vehicle and cut off the connector, leaving plenty of wire attached to the vehicle. Strip the ends off these wires.
2. Connect a multimeter to the two wires of the old buckle.
3. Ensure the old buckle does not have a tongue clicked in.
4. If current flows between the two wires of the old buckle, it is normally closed (NC). If current does not flow through the two wires of the old buckle, it is normally open (NO).

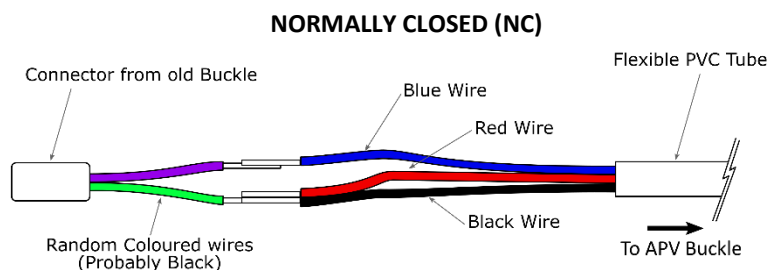
For a Normally Open connection:

- a. Join the RED & BLUE wires of the new buckle together and terminate them to either of the wires on the connector of the old buckle.
- b. Connect the BLACK wire of the new buckle to the other wire on the old connector.
- c. Insulate the connections with heat shrink or equivalent.



For a Normally Closed connection:

- a. Join the RED & BLACK wires of the new buckle together and terminate them to either of the wires on the connector of the old buckle.
- b. Connect the BLUE wire of the new buckle to the other wire on the old connector.
- c. Insulate the connections with heat shrink or equivalent.



5. Turn the vehicle ignition on without starting it and double check that the warning/alarm goes off when the tongue/latch plate is engaged with the buckle.
6. Install seat belt restraint as per instructions provided.
7. Check that the wiring will not catch, get caught or come under tension over the full range of seat movement/adjustment.

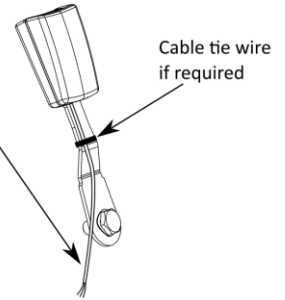
### NOTE

Please leave these instructions with the vehicle to ensure they reach the initial wearer.

## CAUTION

Care must be taken when installing the buckle and connecting the wires

Critical electrical components may become dislodged and not function if force is applied to the wires



**NOTE:**  
ELECTRIC OPTION  
ON STEM AND STALK  
BUCKLES ONLY

### ELECTRICAL CONNECTION

BUCKLE WIRING: BLUE WIRE Normally Closed  
BLACK WIRE Normally Open  
RED WIRE Common  
MAXIMUM POWER: 2A at 12V or 1A at 24V