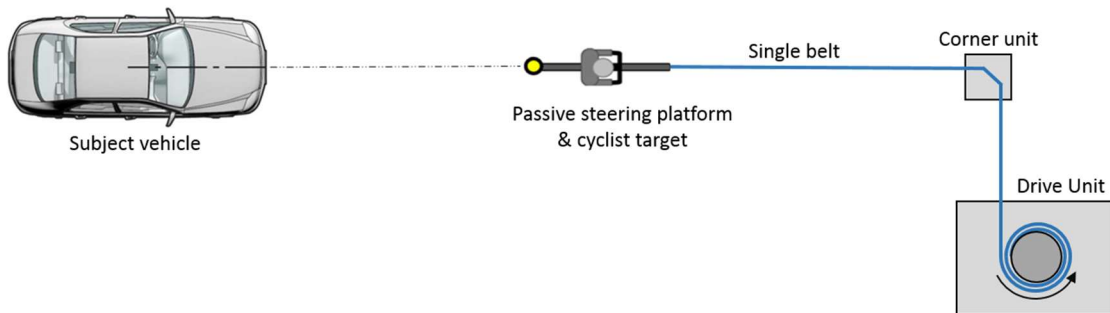


# SPT Single Belt Upgrade

## OVERVIEW

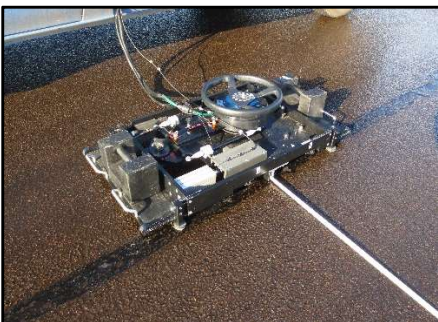
AB Dynamics supplies a set of attachments which can be fitted to a conventional SPT drive unit to convert the output from 'dual belt' to 'single belt'. The attachment enables the drive unit to reel a toothless belt into a drum, attached to which is a specially designed platform with a passive steering system. A video demonstrating the lateral accuracy of the system is available upon request.

This system is ideal for conducting longitudinal cyclist FCW/AEB tests where there should be no equipment in between the test vehicle and cyclist target. The Euro NCAP 2018 test protocol for cyclist testing contains such restrictions in the longitudinal test scenario.



## FUNCTIONALITY

- Quick and simple changeover time (~10 mins) to convert an SPT drive unit from dual belt to single belt. Requires only a set of hex keys.
- Platform is manually brought into test starting position
- Integral hardware and software features prevent the belt becoming tangled
- Over-drivable corner unit distances the drive unit from the vehicle trajectory
- Internal calculations take account of changing drum diameter to ensure platform positional and speed accuracy
- Software test setup and path generation using ABD Robot Controller is identical to conventional SPT systems
- Tests in excess of 20kph possible.



*Upgraded SPT drive unit*



*Corner unit*

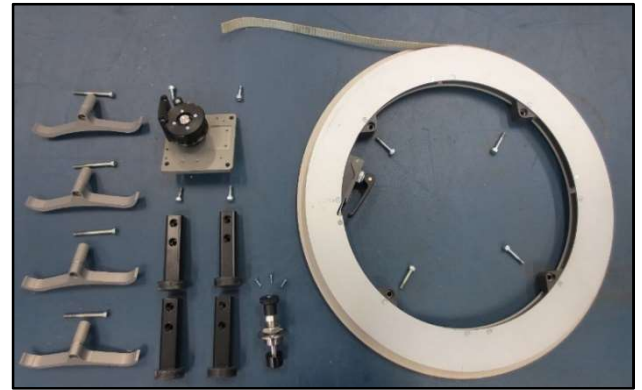
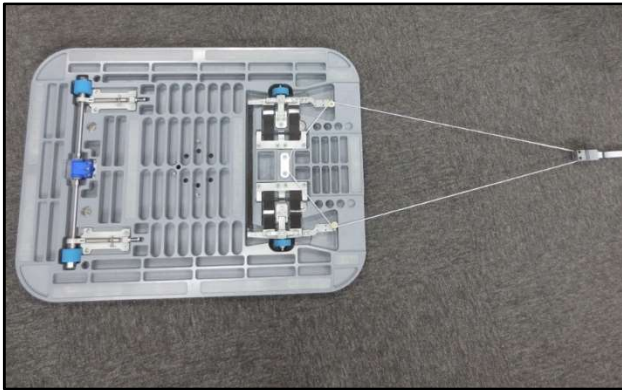


*Passively steered platform*

## INSTALLATION

From February 2017, all AB Dynamics SPT drive units will have the necessary mountings pre-machined such that the single belt attachments can be purchased and customer-installed at a later date if required. Drive units fabricated before this date must be returned to ABD for re-work before the single belt attachments can be fitted (Typically 1 week turnaround time excluding shipping). Kit inventory:

- Drum with low profile belt (50m or 100m length), bolted to underside of main SPT pulley
- Friction brake and belt retainers to prevent belt spilling out during test reset
- Passively steered over-drivable platform to ensure good lateral positioning
- Magnetic break-away connection for platform
- Software upgrades to add in SPT Single Belt functionality

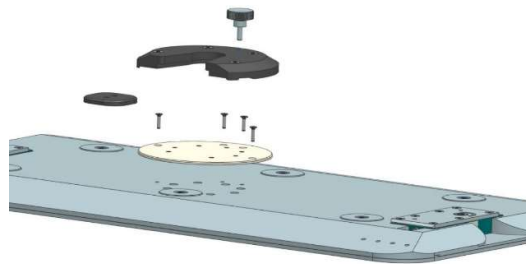


*Passively steered platform (underside view with base removed) + SPT Single Belt drive unit kit*

## TARGET ATTACHMENT

ABD also supplies a quick-release magnetic attachment which securely fixes the Euro NCAP cyclist target to the existing SPT dual belt platform. This assembly retro-fits onto existing cyclist targets in order to significantly improve the cyclist target stability. The features include:

- Retrofit bottom fitting for the Euro NCAP cyclist target
- Impact-release mounting plate which attaches magnetically to platform
- Screw-removal mechanism to easily detach magnetic plate
- Template jig to drill optional securing mounting holes
- Removes the need for guide ropes to secure the Euro NCAP cyclist target
- Suitable for cyclist AEB/FCW scenarios when a single-belt system is not necessary.



## GET IN TOUCH

Anthony Best Dynamics Ltd  
Middleton Drive  
Bradford on Avon  
Wiltshire  
BA15 1GB England

**Email:** [info@abdynamics.com](mailto:info@abdynamics.com)  
**Tel:** +44 (0)1225 860 200  
**Web:** [www.abdynamics.com](http://www.abdynamics.com)

**RELEASE DATE**  
20<sup>th</sup> February 2018

**ISSUE No.**  
02