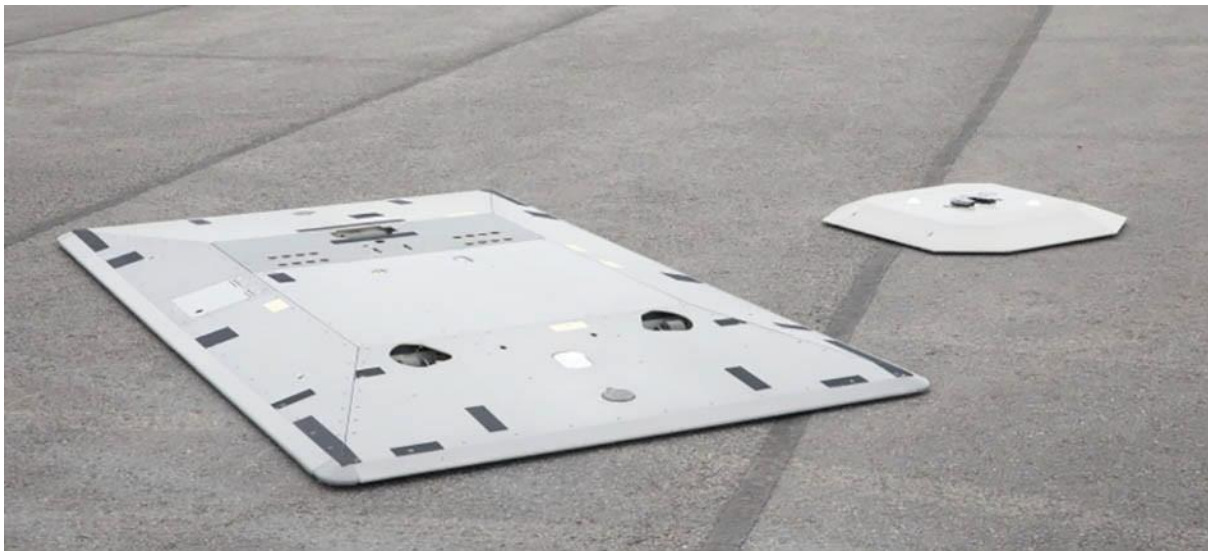


Track Test Systems

Safety Instructions - ADAS Platforms



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ADAS PLATFORMS

General

These safety instructions apply for the following ADAS Platforms:

- Guided Soft Target (GST)
 - GST Mk1, GST Mk2, GST80, GST100, GST120
- LaunchPad
 - LaunchPad50, LaunchPad60, LaunchPad80

All operators of AB Dynamics ADAS Platforms MUST obey the safety precautions included in this document.

ADAS Platforms are driverless vehicles designed to automatically steer, brake and accelerate to follow the test programmed by the operator.

Whilst undertaking the applicable training you will be under the supervision of AB Dynamics. The safety precautions in this document will be included during this training, at the end of the training you will be required to sign a statement to ensure that you have read and understood the safety instructions. You will also be given a certificate confirming you have completed the training.

All operators of the ADAS Platform must read the relevant technical documentation and follow the detailed instructions given. Reading the manual is NOT a substitute for training.

Safety Instructions

- Possible serious injury: ADAS platforms and vehicles, when operated together, may result in dangerous responses at high speeds. Personnel must always be fully aware of the risks when in the test area or operating the equipment.
- Operator hazard: ADAS platforms must not be operated if any personnel are overtired, under the influence of drugs or alcohol, or have a medical condition preventing safe driving. If you do not obey this instruction, there is a risk of serious injury.
- Possible serious injury: ADAS platforms contain high voltage electrical equipment. There is a risk of severe electrical shock or burns if the product is damaged or abused. Maintenance of the high voltage equipment must only be carried out by a suitably qualified person.
- The GST and LaunchPad contain Lithium-ion cells made into a battery. When transporting, the battery should be declared and the material datasheet for the battery supplied to shippers. A Class 9 miscellaneous Dangerous Goods declaration must be made.
- ADAS Platforms and robot controlled test vehicles must only be operated on a suitable test track and not on public highways, freeways or other roadways. Make sure that there is sufficient space on the test track away from obstacles or barriers to conduct the test safely.
- If high speed tests are to be undertaken involving an ADAS Platform and test vehicle(s), the use of additional safety equipment should be considered including roll cages, full harness, helmet and fire protection as appropriate to the testing.
- Where the test involves a potential collision between the ADAS Platform and another vehicle the operator must take appropriate steps to minimise the risk to the vehicle occupants – including but not limited to use of appropriate safety equipment e.g. helmet, seat belts, safety glasses etc, ensuring vehicle windows are closed.
- The test vehicle may be destabilised (or spin) in the event of collision with an ADAS platform. Following a collision with an ADAS platform, the test vehicle's suspension, steering and tyres should be checked for damage.
- Ensure the brake pads and wheels are not worn out and all components such as panels, skid plates, nose cones, antennas and wheels are securely and correctly attached to the ADAS Platform before use.
- ADAS Platforms are heavy. Ensure safe lifting is followed when transporting or handling any ADAS platform. When using the jacking screw with the GST, ensure the ball-lock pin is securely fitted and operator fingers and toes are clear from the chassis underside during lifting/lowering. No work should be performed under the GST whilst it is being solely supported by the jacking screw. When lifting the GST with the screw-in lifting eyes, all four lifting eyes must be fitted with all top panel screws fastened.
- The ADAS Platform battery system should be isolated during servicing by either removing the LaunchPad batteries, pressing the GST red electrical isolator or disconnecting the GST batteries. Where high voltages are present, internal components must only be serviced by a suitably qualified person and with reference to the information in the User manual.
- ADAS Platforms are designed to be driven over. DO NOT let the ADAS Platform hit a stationary test vehicle as this could result in damage to the platform, vehicle, or injury to the vehicle occupant.
- ADAS platforms are intended to carry soft foam targets only. The platforms must not be used to carry people.
- The Emergency Stop Box must remain within easy reach of driver/operator at all times.

Safety Instructions - Platform Targets

- Always try out new tests at low speed, not in excess of 30kph (or 15kph for Launchpads) to check the test is correctly configured.
- Do not attempt to drive the GST or LaunchPad if the suspension is collapsed/deflated or if the platform has become beached, continuing to drive can cause tyre damage and excessive heat.
- ADAS Platforms MUST NOT be used on areas with standing water or in heavy rain. If water is allowed to enter the electrical compartments or batteries the device must be dried and should not be left or stored in a wet state.
- Charging of the ADAS platform batteries must be in a dry and sheltered location and should not be left unattended whilst charging.
- Ensure the ADAS Platform has been correctly set-up before starting a test. The operation instructions, provided in the software and user guide, MUST be followed to ensure the Platform Target operates correctly.
- If the ADAS platform is malfunctioning or showing visible signs of damage operation must be discontinued. Consult AB Dynamics for further advice.
- Personnel MUST NOT go near or stand in the path of the ADAS Platform when in operation. Press the E-stop button or turn off the activation key on the Safety Controller Basestation before approaching the platform.
- No other vehicles or personnel should be allowed to enter the test area or obstacles allowed to be placed in the test area unless specially required when testing driver assistance systems.
- The ADAS Platform must only be operated if there is a direct line of sight to the operator at the base station. The operator must remain vigilant at all times.
- Ensure the software driverless safety boundary has been set up appropriately for the test area. Note that if the platform is travelling parallel to the boundary and at high speed, a sudden change in direction may result in the platform crossing the boundary whilst still moving. Extra margin should therefore be considered around fixed objects on the test track.
- Suitable barriers should be positioned around the test so as to prevent a 'runaway' vehicle from leaving the test area in the event of a critical vehicle or system failure.
- Personnel MUST always know of the risks around them.
- Never attempt to disassemble or modify any AB Dynamics products, unless instructed to do so by AB Dynamics. Unauthorised disassembly and/or modification can result in failed or incorrectly functioning hardware, which in turn can lead to potentially dangerous situations.

I have read the relevant safety precautions and agree to comply with the requirements.

| | | | |
|-----------------------------|--|-------------|--|
| Name | | Date | |
| Job Title / Position | | | |
| Company | | | |
| Signature | | | |

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