



## Having problems with damaged trucks?

### Higher demands

The environment in today's warehouses is characterised by fast pace. More is demanded in a shorter period of time. This puts stress on both operators and equipment and this often results in damage to goods and equipment.

Quite often the 80/20 rule applies, i.e. 20% of the operators account for 80% of all the damages. The problem is to identify these 20% and take corrective actions, may it be improved training, new routines etc.

### Identification of impacts

One way of helping companies out on this issue is to equip the trucks with a shock sensor. This is a device that measures impacts and shocks on the trucks. Many of our trucks can be equipped with this device directly from production.

### Advantages of having a shock sensor installed:

- Impact on trucks can be measured, recorded and linked to certain drivers.
- Careless and dangerous driving can be detected and corrective measures can be taken.
- Damages to trucks, goods and racking can be brought down and this translates into money saved.
- Shock sensors will have a positive effect on driving behaviour, leading to increased safety at the site.

### How does it work?

A shock sensor is mounted on the truck. It will have the ability to record impacts along two axes, in the x and the y directions. Only impacts exceeding a preset threshold value will be registered. These values can be set through a service parameter on the truck. When a shock exceeds the threshold value, the truck will be limited to creep speed, 2,5 km/h, and a signal will sound every five seconds until a reset of the truck has been performed. A reset is done, either by entering a certain PIN code, or presenting a reset key/card. The reset method depends on which system is used for logging onto the trucks.



**TOYOTA**

MATERIAL HANDLING

stronger together

Data for the 10 most recent impacts is stored and will show the following\*:

- Date and time for impact
- Magnitude of impact
- The associated PIN codes for these impacts

This data can be viewed via the truck's display

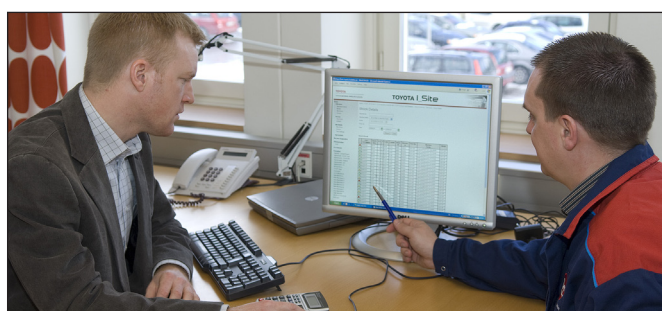
\* *Relates to the stand alone shock sensor*



## Shock sensor in combination with TOYOTA I\_Site

If the trucks are equipped with the TOYOTA I\_Site fleet management system, shocks can be monitored, without even being present at the site.

Just log on the TOYOTA I\_Site (web site) and you can monitor shocks on your entire truck fleet. The shocks can be viewed per site, per truck category, per individual truck and even per operator. Information can be sorted in different ways just by a click of the mouse.



For example, you may be interested in seeing all the shocks that happened at a certain site for a certain period of time. Just select the shock report and click on the header for shocks and they will be sorted automatically from the most severe to the least severe.

	Date YYYYMMDD	Shock Time	X	Y	Login	Logout	Driver ID	Machine ID	Fleet No.	Machine Family	Model
▲	20090206	14:20	53	67	14:20	14:21	01258	741325	6788-965	(Rider) Reach trucks	RR B2E2
▲	20090205	08:25	48	68	08:25	08:37	01258	741325	6788-965	(Rider) Reach trucks	RR B2E2
▲	20090205	10:11	54	0	08:41	13:14	01258	741325	6788-965	(Rider) Reach trucks	RR B2E2
▲	20090210	08:51	47	0	08:49	09:01	00001	741325	6788-965	(Rider) Reach trucks	RR B2E2
▲	20090210	09:16	37	14	09:02	12:56	00002	741325	6788-965	(Rider) Reach trucks	RR B2E2
●	20090206	14:01	33	29	13:54	14:02	00001	741325	6788-965	(Rider) Reach trucks	RR B2E2
●	20090209	10:30	11	23	09:42	11:08		741325	6788-965	(Rider) Reach trucks	RR B2E2
●	20090216	08:59	25	34	08:07	10:25	01258	741325	6788-965	(Rider) Reach trucks	RR B2E2
●	20090216	12:49	21	4	10:25	12:49	00001	741325	6788-965	(Rider) Reach trucks	RR B2E2



TP - Technical Publications, Sweden — 749668-040, 0904