

Table I Costs and Benefits Associated with the Implementation of the Amendments

Item	Measure	Cost	Benefit
a	To extend the mandatory requirement for anti-lock braking device (ABS) to apply to all vehicles and trailers of categories M ₂ , M ₃ , N ₂ , N ₃ and O ₃ .	<p>It is very difficult to obtain a true cost for the addition of ABS to a vehicle. Figures quoted in paragraph 5(ii), supplied by SMMT, range from £1 000 to £2 500 for a goods vehicle to £1 500 for a trailer. One major vehicle manufacture who fits ABS to all but the lowest powered vehicles in their range quotes £600 to have it fitted to these vehicles during production as an optional extra. A second manufacturer who fits ABS as standard to all vehicles in their range reduces the price by £300 to £600, depending upon the vehicle specification, when the vehicle is ordered without ABS.</p> <p>Table III lists the possible costs to Industry to have ABS as standard on HGVs. Table V supplies the equivalent costs to Industry to have ABS as standard on buses. Source of data SMMT and the Transport Statistics Great Britain 2000 Edition.</p> <p>The number of O₃ trailers (over 3.5 but under 10 tonnes) produced each year is very low and not a significant factor.</p>	<p>ABS is intended to prevent the wheels on a vehicle from locking and therefore preventing the vehicle from “skidding”. If it is assumed that all the HGVs that were involved in accidents during 1999, where skidding was a factor, were not equipped with ABS, then a saving of approximately £200 000 000 could have been made if ABS had been fitted and the accident prevented. See Table II.</p> <p>Similarly if all the buses involved in accidents where “skidding” was a feature were assumed not to have ABS, then a saving of approximately £28 000 000 could have been made. – See Table IV. Source of data the Road Accidents Great Britain: 1999 – The Casualty Report.</p>
b	Prohibition of the use of asbestos in brake friction material.	Nothing. Regulations introduced under the Consumer Protection Act, the Road Vehicles (Brake Linings Safety) Regulations 1999, prohibited the manufacture, supply or fitting of asbestos-based brake linings.	Improved environmental and health standards.

c	Introduction of new downhill performance requirements for heavy goods vehicles over 12 tonnes authorised to tow trailers over 10 tonnes.	Typical prices quoted by vehicle manufacturers for a system fitted at production are as follows: Hydraulic system - £3000 to £4500. Electro Mechanical System – up to £4000. An engine brake - £850 to £1200.	Directive 98/12/EC and Regulation 13.09 introduce new performance requirements that result in the braking characteristics of the trailer being more similar to the tow vehicle. By introducing requirements that will demand that endurance brakes are fitted to tow vehicles and by ensuring that the fade properties of the combination are maintained, the braking systems will be more reliable. The operators' maintenance costs should be lower due to the reduction in use of the foundation brakes in favour of the endurance brake during light braking and hill descents.
d	The requirement for a dedicated power supply to the ABS on the trailer to be supplied via the ISO 7638 electrical connector.	Nothing. It has become common that new trailers are manufactured with a dedicated power supply for the ABS through the ISO 7638 connector. To maximise the safety of mixing old tractor units with new trailers, manufacturers additionally power the ABS via the ISO 3731 (24S) connector or from the stop lamps via the ISO 1185 (24N) connector.	The ISO 7638 connector provides a dedicated electrical power supply for the ABS and is specifically designed to supply sufficient current capacity to meet the demands of the system. Operators will be confident that the ABS will operate satisfactorily and that there is still a back-up system available, powered by the 24S connector.

e	Improvements in modern technology have introduced the use of disc brakes on lightweight trailers equipped with inertia-override brakes. These new requirements recognise this and provide equivalent technical requirements to those currently available for drum braked varieties.	Nothing. The revised regulations do not specify that disc brakes must be used, they only provide technical requirements for when they are fitted. The approval cost will be similar to those that the manufacture already has to bear for a drum-braked system.	Manufacturers have an increased choice for the type of braking systems that can be used.
f	Introduction of an “In Use” requirement into C & U that states that if both the tow vehicle and the trailer are equipped with ISO 7638 connectors then they must be used to power the ABS on the trailer regardless of any alternative methods available.	£100 per vehicle. Since 1992 all vehicles authorised to tow trailers over 10 tonnes have been fitted with the ISO 7638 connector as have many, but not all, of the trailers over 10 tonnes. It is known that many operators do not use the specified ISO 7638 connector to supply power to the trailer ABS. Instead they rely on the alternative methods for supplying power e.g. via the stop lamps. Motor vehicle manufacturers could ensure correct powering of the ABS on semi trailers by “hard wiring” the ISO 7638 plug to a flexible lead on to the tractor unit as detailed in the ISO standard.	The ISO 7638 connector provides a dedicated electrical power supply for the ABS and is specifically designed to supply sufficient current capacity to meet the demands of the system. Operators will be confident that the ABS will operate satisfactorily and that there is still a back-up system available, powered by the 24S connector.
g	Introduction of a requirement into C & U that demands that trailers over 8 years of age which undergo significant alteration to their original design specification, that is subject to a notifiable alteration, must be modified to comply with all the latest construction, fitting and performance standards with respect to their braking system.	It is impossible to quantify the cost of this measure. Ultimately the cost to up-grade an old trailer to the latest standard could be comparable to the price of a new unit. On average the Vehicle Inspectorate record 2200 notifiable alterations to heavy trailers each year. They are not able to identify the number of trailers that are over 8 years old that would be subject to this measure.	The Department recognises that the service life of a trailer exceeds 15 years and during this period a trailer may be subject to several alterations and major rebuilds. This results in notional new trailers remaining in service and operating at a level of safety significantly below that required by current legislation. This measure will ensure that many of the older trailers are brought up to the latest standards, offering more stable and safer braking.

h	Recognition of the latest British Standard BS AU 138b:2000 for pneumatic braking system couplings.	Currently vehicle manufacturers have to fit couplings that comply with an earlier British Standard. The improved couplings are not expected to be any more expensive than the earlier standard devices. If couplings become defective operators will have to purchase a complete item to replace defective ones. It is not possible to quantify the cost of using parts salvaged from other defective couplings in relation to the overall cost of a new item.	The new couplings are non-serviceable items. This will prevent items being removed, dismantled and put back together incorrectly using second-hand parts from couplings previously removed. Incorrect assembly can result in air leakage or restricted airflow, which can cause brakes to bind, leading to higher running costs and potential vehicle failure.
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