UNITED NATIONS



Distr.
GENERAL

TRANS/WP.29/1999/44 12 August 1999

Original: ENGLISH

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Working Party on the Construction of Vehicles (One-hundred-and-nineteenth session, 9-12 November 1999, agenda item 9.3.)

AGREEMENT CONCERNING THE ADOPTION OF UNIFORM CONDITIONS
FOR PERIODICAL TECHNICAL INSPECTIONS OF WHEELED VEHICLES AND THE
RECIPROCAL RECOGNITION OF SUCH INSPECTIONS

PROPOSAL FOR DRAFT ADDENDUM 2 - RULE NO. 2: UNIFORM PROVISIONS FOR PERIODICAL TECHNICAL INSPECTIONS OF WHEELED VEHICLES WITH REGARD TO THEIR ROADWORTHINESS

Transmitted by the secretariat

Note: The text reproduced below was prepared by the secretariat in order to advance the consideration of a new Rule No. 2, to be annexed to the Agreement, and concerned with safety aspects of roadworthiness of motor vehicles of categories M2, M3, N2 and N3, used in international transport and having permissible maximum mass over 3,500 kg. It is based on the text of document ECE/TRANS/RCTE/CONF./5/FINAL and document TRANS/WP.29/R.764/Rev.1-TRANS/SC.1/WP.1/R.138/Rev.1, from which were eliminated the inspection provisions and the requirements not related to the categories of vehicles concerned (TRANS/WP.29/516, paras. 87 and 88).

The Working Party and the Administrative Committee of the above-mentioned Agreement are invited to consider the proposal in conjunction with the European Community Council Directive 96/96/EC, taking also into account the contribution expected to be provided by the International Motor Vehicle Inspection Committee CITA (TRANS/WP.29/640, paras. 30 and 128).

This document is a working document circulated for discussion and comments. The use of this document for other purposes is the entire responsibility of the user. Documents are also available via the INTERNET:

http://www.unece.org/trans/main/welcwp29.htm

GE.99-

1. SCOPE

- 1.1. For the purpose of Article 1 of the Agreement concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles and the Reciprocal Recognition of such Inspections, the items to be inspected are related to safety requirements;
- 1.2. Wheeled vehicles used in international transport shall satisfy the requirements set out below;
- 1.3. Contracting Parties may decide to extend the requirement of paragraph 1.2. above also to vehicles used in domestic transport.

2. DEFINITIONS

For the purpose of this Rule,

- 2.1. "Agreement" means the 1997 Vienna Agreement concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles and the Reciprocal Recognition of such Inspections;
- 2.2. "International Technical Inspection Certificate" means a certificate about the first registration after manufacture and the periodical technical inspections of wheeled vehicles in compliance with the provisions of Article 1 and Appendix 2 of the Agreement (see para. 2.1. above);
- 2.3. "Periodical Technical Inspection" means a periodical administrative uniform procedure by which the authorized technical Inspection Centres responsible for conducting the inspection tests declare, after carrying out the required verifications, that the wheeled vehicle submitted conforms to the requirements of this Rule;
- 2.4. "Wheeled vehicle" means motor vehicles of categories M2, M3, N2 and N3, as specified in Consolidated Resolution R.E.3. (document TRANS/WP.29/78/Rev.1, as amended), used in international transport whose permissible maximum mass exceeds 3,500 kg, except those used for the carriage of passengers and having not more than eight seats in addition to the driver's seat;
- 2.5. "Verification" means the proof of compliance with the requirements set out in the Annex to this Rule through tests and checks carried out using techniques and equipment currently available, and without dismantling or removing any part of the vehicle;
- 2.6. "1958 Geneva Agreement" means the Agreement concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be fitted and/or used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals granted on the basis of these Prescriptions, done at Geneva on 20 March 1958 and amended as of 16 October 1995;
- 2.7. "ECE Regulation" means a Regulation annexed to the 1958 Geneva Agreement.

3. PERIODICITY OF TECHNICAL INSPECTIONS

Vehicle Categories	Maximum Inspection Intervals
Passenger-carrying motor vehicles: M2 above 3,500 kg and M3	One year after the first registration and annually thereafter
Goods vehicles: N2 and N3	

4. TECHNICAL INSPECTION

Vehicles to which these provisions apply must undergo a periodic technical inspection in accordance with the Annex hereafter.

Following verification, the compliance with at least the provisions of this Annex shall be confirmed by the International Technical Inspection Certificate.

5. INSPECTION REQUIREMENTS

The inspection shall cover at least the items listed below, provided that these are related to the obligatory equipment of the vehicle being tested in the implementing State concerned.

- 5.1. the identification of the vehicle;
- 5.2. Braking equipment;
- 5.3. Steering;
- 5.4. Visibility;
- 5.5. Lighting equipment and parts of electric system;
- 5.6. Electromagnetic interference suppression;
- 5.7. Axles, wheels, tyres, suspension;
- 5.8. Chassis and chassis attachments;
- 5.9. Other equipment;
- 5.10. Additional inspections of vehicles for the commercial carriage of passengers.

6. NAMES AND ADDRESSES

The Contracting Parties to the Agreement applying this Rule shall communicate to the United Nations Secretariat basic information on administrative authorities responsible for supervising the inspection tests and issuing the International Technical Inspection Certificates.

<u>Annex</u>

MINIMUM INSPECTION REQUIREMENTS

The inspection shall cover at least the items listed below. For the checks listed in this annex the vehicle components need not be disassembled.

1. IDENTIFICATION OF THE VEHICLE $\underline{1}/$

Item	Principal Reasons for Rejection
Registration number plates	 number plate(s) missing or so insecure that it is (they are) likely to fall off inscription missing illegible
Vehicle identification (serial) number	missing or can not be foundincomplete, illegible

2. BRAKING EQUIPMENT

	Item	Principal Reasons for Rejection
2.1.	Visual inspection	
	The visual inspection covers all parts of the braking system relevant for safety. All parts (including the warning equipment) must be in a safe operational condition and must not be damaged or have undergone any undue repair / alterations / wear.	
2.1.1.	Energy source (compressor, hydraulic pump, vacuum pump)	external damageleaking
2.1.2.	Energy storage reservoir (pressure tank, hydraulic accumulator, vacuum reservoir)	 external damage leaking attachment defective leaking water drain system inoperable
2.1.3.	Brake-fluid reservoir	external damageleakingbrake-fluid level too low
2.1.4.	Brake operating devices	 damaged too tight guide worn anti-slip provision on brake pedal insufficient pedal / lever travel too high pedal / lever travel reserve insufficient operational reliability of parking-brake system insufficient

 $[\]underline{1}$ / Inspection of these items may be omitted, if it has been carried out during the given periodical inspection under another Rule annexed to this Agreement (e.g. Rule No. 1).

Item		Principal Reasons for Rejection
2.1.5.	Overrun braking system	 inadmissible design external damage attachment defective breakaway braking device missing or damaged
2.1.6.	Rigid brake pipes and flexible brake hoses	external damageconsiderably corroded or agedinadequately installedattachment defective
2.1.7.	Cables and cable pulls	 damaged, fanned out considerably corroded inadequately installed attachment defective unsecured cable guide damaged, too tight
2.1.8.	Linkage	damagedinadequate repair by weldingtoo tight
2.1.9.	Joints	guides worntoo tightattachment defective, insecure
2.1.10.	Braking devices (valves, anti-freeze pump, air dryer, etc.)	 external damage considerably corroded too tight attachment defective incorrectly adjusted
2.1.11.	Service data plate for axle-load- related brake-power control	- missing - data incomplete - illegible
2.1.12.	Brake cylinder	 external damage attachment defective excessive stroke dust protection cover missing or badly damaged
2.1.13.	Brake shafts, brake lever	- damaged - too tight - bearing worn
2.1.14.	Slack adjusters, setting device	 external damage inadequately installed incorrectly adjusted inoperable
2.1.15.	Wheel brakes	too tightexcessive clearance
2.1.15.1.	Brake drums, brake discs	excessive wearexcessive scoringcracks

	Item	Principal Reasons for Rejection
2.1.15.2.	Brake lining (brake shoes / brake pads)	 damaged insufficient thickness oily "glazed" (changed surface structure of lining due to heat)
2.1.16.	Couplings	damagedleakinginadequately installed
2.1.17.	Shut-off valves	- damaged - leaking
2.1.18.	Low-pressure warning indicator or gauge	- damaged - not operating
2.1.19.	Test connections	- missing - damaged
2.1.20.	Retarder system	external damageattachment defective

2.2. FUNCTIONING AND PERFORMANCE CHECKS

	Item	Principal Reasons for Rejection
2.2.1.	Service brake	
2.2.1.1.	Gradual variation time characteristics	 braking effort cannot be graduated; the pressure in the brake cylinders increases too slowly when the brake pedal is fully pressed down
2.2.1.2.	Brake-power control	 no correspondence with prescribed adjustment values (plate indicating automatic load- dependent brake-power distribution)
2.2.1.3.	Brake performance	 a brake performance of less than [40] %, related to the maximum permissible mass, or the braking effort is lower than the reference values laid down for the vehicle axle
2.2.1.4.	Uniformity	 the braking effort for any wheel is less than [70] % of the highest recorded effort from another wheel on the same axle. In the case of a brake test on the road: excessive deviation of the vehicle from a straight line excessive fluctuation of brake effort due to distorted brake discs or drums
2.2.1.5.	Pressure protection (multi-circuit safety valve)	- inoperable - operation impaired

ltem		Principal Reasons for Rejection
2.2.1.6.	Breakaway protection on the vehicle (compressed air brake system)	 upon breakaway of the air brake line to the trailer pressure reduction in the pneumatic elements of the spring brake cylinders upon breakaway of the brake line to the trailer the air brake line to the trailer is not automatically ventilated
2.2.1.7.	Breakaway protection on trailer	upon breakaway of the air brake line there is no automatic braking of the trailer
2.2.1.8.	Tightness	- leaking of the braking system
2.2.1.9.	Overrun braking system	overrun travel too bigoperation of shock absorber impaired
2.2.1.10.	Compressor	- filling time too long
2.2.1.11.	Anti-lock system	failure message via warning lampwarning lamp inoperable
2.2.3.	Parking brake	
2.2.3.1.	Brake performance	a brake performance of less than [16] % relative to the maximum permissible mass, or for towing vehicles of less than [12] % relative to the maximum permissible mass of vehicle combinations, whichever value is higher
2.2.3.2.	Uniformity	 the braking effort from any wheel is less than [50] % of the highest recorded effort from another wheel on the same axle.
2.2.4.	Retarder	- inoperable

3. STEERING

	Item	Principal Reasons for Rejection
3.1.	Performance	too tightno self-alignmentexcessive play
3.2.	Steering wheel	inadmissibledamagedattachment defectiveexcessive axial play
3.3.	Steering column	 damaged attachment defective odd sounds flexible coupling (Hardy disc) damaged, loose steering-column adjustment not lockable
3.4.	Steering-head bearing	damagedexcessive play

	Item	Principal Reasons for Rejection
3.5.	Steering lock	inoperableoperation impaired
3.6.	Steering gear	 leaking attachment defective steering gear casing damaged, cracked odd sounds dust protection covers missing, damaged, loose
3.7.	Steering joints / tie-rod ends	 excessive play damaged protection inadequate dust protection covers missing, damaged, loose
3.8.	Push rods / tie rods	 damaged, cracked, deformed, corroded attachment defective, protection inadequate incorrectly adjusted
3.9.	Steering lever	damaged, cracked, deformed, corrodedattachment defective
3.10.	Steering stop	 missing damaged attachment defective ineffective, incorrectly adjusted
3.11.	Power steering systems	 inoperable cables / hoses damaged, aged, considerably corroded attachment defective leaking insufficient fluid quantity in reservoir V-belt damaged, pre-tensioning incorrect odd sounds
3.12.	Steering shock absorber	 missing inadmissible inoperable attachment defective bearing worn
3.13.	Wheel alignment	- visibly incorrect
3.14.	Castor steering	too tightwheel toe visibly incorrectaxle locking system inoperable
3.15.	Fifth-wheel steering	fifth wheel damagedelectric drive inoperable
3.16.	Bogie	damaged, crackedtoo tight, stopping pointsexcessive playattachment defective

	Item	Principal Reasons for Rejection
3.17.	Transmission mechanism in the case of rod and cable steering	 damaged, cracked, deformed, corroded excessive play attachment defective, inadequate safety device transmission too tight steering wedges inadmissible, damaged, worn
3.18.	Short coupling	 inoperable damaged limit switch inoperable, defective locking device leaking of hydraulic system bearing worn, excessive play, wear limit exceeded transmission mechanism too tight, loose, worn, insufficient lubrication

4. VISIBILITY

	ltem	Principal Reasons for Rejection
4.1.	Field of vision	- visibility inadmissibly impaired
4.2.	Condition of glass	non-approved or inadmissibly altered screens or screen foilsdamaged in the field of vision
4.3.	Rear-view mirror	 required mirrors missing insufficient view to the back damaged, clouded attachment defective unadjustable folding mechanism inoperable
4.4.	Windscreen wipers	 missing inoperable wiper blades damaged, worn effect insufficient
4.5.	Screen washers	inoperableeffect insufficient

5. LIGHTING EQUIPMENT AND PARTS OF ELECTRIC SYSTEM

ltem		Principal Reasons for Rejection
5.1.	Active lighting equipment - headlamps and other lights	 non-approved design below or above prescribed / permissible number attachment contrary to regulations (arrangement / geometric visibility) attachment defective damaged inoperable effect insufficient colour of emitted light not according to regulations function of control device impaired or switching logic incorrect
5.1.1.	Main and passing (dipped) beam headlamps	 see 5.1 alignment contrary to regulations (too high, too low or twisted) headlight-range inoperable switch-on control inoperable
5.1.2.	Front position, end-outline marker, parking, side-marker and rear position lamps	see 5.1switch-on control inoperable
5.1.3.	Stop lamps	- see 5.1
5.1.4.	Direction indicator and hazard warning lamps	 see 5.1 not in accordance with prescribed flashing frequency operational / actuating control inoperable
5.1.5.	Front and rear fog lamps	see 5.1actuating control inoperable
5.1.6.	Reversing lamps	see 5.1alignment too high
5.1.7.	Rear registration plate lamp	- see 5.1
5.1.8.	Additional headlamps and lights (e.g. spot / working lights, blue or yellow special warning lamps)	see 5.1alignment contrary to regulations
5.2.	Passive lighting equipment (front, side and rear retroreflectors) (other retro-reflecting plates, signs and foil markers, e.g. according to ECE Regulations Nos. 69, 70 and 104)	 inadmissible design below or above prescribed / permissible number attachment contrary to regulations attachment defective damaged effect insufficient colour of reflected light contrary to regulations
5.3.	Electrical wiring	damaged insulation with short-circuit / fire hazardinstallation of cables not chafe-proof

ltem		Principal Reasons for Rejection
5.4.	Batteries	no attachment, loosecover (positive terminal) missing
5.5.	Electrical connections between tractor vehicle and trailer or semi-trailer	 trailer socket / plugs / connecting cable missing, damaged or contrary to regulations malfunction, incorrect contact assignment

6. ELECTROMAGNETIC INTERFERENCE SUPPRESSION

	ltem	Principal Reasons for Rejection
6.1.	Ignition system	 spark-plug socket damaged ignition cable damaged ignition distributor cracked ignition coil damaged screenings damaged

7. AXLES, WHEELS, TYRES, SUSPENSION

	ltem	Principal Reasons for Rejection
7.1.	Axles	 axle body cracked, deformed, broken, considerably corroded, insecure inadequate repair by welding attachment defective excessive play of wheel bearing wheel bearing too tight, jammed
7.2.	Suspension	worn, excessive playattachment defectivedamaged or broken
7.3.	Springs, stabilizer	 missing damaged, broken, deformed attachment defective excessive wear springs inadmissible bearing worn
7.4.	Vibration absorbers	 missing damaged, leaking attachment defective bearing worn effect insufficient

	Item	Principal Reasons for Rejection
7.5.	Air suspension	 inoperable leaking air-spring bellows damaged, leaking, attachment defective, distorted valves leaking, inoperable, misaligned cables / hoses leaking, corroded / porous
7.6.	Hydropneumatic suspension	 inoperable leaking suspension / shock-absorber strut damaged reservoir damaged, leaking, incorrect fluid level leads damaged, corroded
7.7.	Wheels	 cracks, broken, strongly deformed attachment defective absence of wheel nuts or bolts centring defective no proof of admissibility (size, type)
7.8.	Tyres	 damaged incorrect mounting insufficient tread depth non-approved size, type inadmissible in respect of load-carrying capacity and speed inadmissible use of different types

8. CHASSIS AND CHASSIS ATTACHMENTS

	Item	Principal Reasons for Rejection
8.1.	Frame, structural parts	 damaged, cracked, broken, deformed considerably corroded inadequate repair screwed or riveted joints loose, damaged
8.2.	Rear protective device / side protective device	 missing attachment contrary to regulations damaged, deformed inadmissibly altered attachment defective
8.3.	Towing equipment	missingdamagedattachment defective
8.4.	Drawbar / pull-rod	 inadmissible damaged, deformed, cracked bearing worn inadequate and/or inadmissible repair attachment defective, loose support missing, loose, damaged, deformed drawbar bearing too tight, worn, damaged

ltem		Principle Reasons for Rejection
8.4.1.	Tow-bar eye	 wear sleeve missing or worn damaged, distorted, deformed wear limit exceeded inadequate attachment
8.4.2.	Adjustment of length	 damaged, jammed, worn insecure inoperable no end limitation or stop arrester worn
8.4.3.	Height adjuster	 missing damaged, jammed, worn inoperable arrester worn range of adjustment and/or ground clearance insufficient
8.5.	Coupling ball with support / tow-ball coupling	 inadmissible damaged arrester inoperable wear limit exceeded inadequate installation, inadmissible repair welding attachment defective
8.6.	Shackle-type towing device	 inadmissible damaged, operating lever defective automatic stop inoperable wear limit exceeded attachment defective
8.7.	Fifth-wheel coupling / assembly disc	 inadmissible damaged, worn, excessive play automatic stop inoperable inadmissible repair by welding operating lever damaged, sharp-edged attachment defective
8.8.	Fifth-wheel kingpin	inadmissibledamagedattachment defectivewear limit exceeded
8.9.	Supporting equipment	missingattachment defectiveinoperable, too tight
8.10.	Body / driver's cabin	 damaged, considerable rust penetration inadmissibly altered attachment defective sharp-edged inadequate repair

	Item	Principle Reasons for Rejection
8.10.1.	Bumpers / spoiler	missinginadmissibledamaged, broken, sharp-edgedattachment defective
8.10.2.	Mud flaps	- missing - ineffective
8.10.3.	Wheel cover	missinginsufficient
8.10.4.	Entrances, steps	considerably corrodedunsafe
8.10.5.	Doors, bonnets, handles, locks, hinges	 attachment defective too tight lock inoperable door handle missing, damaged attachment defective door end-stop missing, inoperable
8.11.	Seats, seat bench	inadmissibledamagedattachment defectiveadjustment equipment and arrester inoperable
8.12.	Footrests	missingdamagedattachment defective
8.13.	Spare-wheel support	- attachment defective, securing device missing or ineffective
8.14.	Loading space floor / walls / stanchions	damaged, considerably corrodedattachment defectivescrewed or riveted joints loose, damaged
8.15.	Loading space tarpaulin / rack / fasteners	 hoop rack damaged attachment defective platform-gate fasteners damaged, inoperable, sharp-edged
8.16.	Tilting gear	- retaining device missing, inoperable
8.17.	Loading equipment	 leaking of hydraulic or compressed-air equipment attachment defective screwed or riveted joints loose, damaged
8.18.	Luggage rack / carrier	inadmissibleattachment defectivelamps covered-upsharp-edged
8.19.	Heating, ventilation	 missing inoperable effect insufficient design contrary to regulations heat exchanger defective

9. OTHER EQUIPMENT

ltem		Principal Reasons for Rejection	
9.1.	Safety belts	 missing design contrary to regulations damaged, worn fasteners inoperable, damaged automatic belt retracting mechanism jammed, inoperable attachment defective 	
9.2.	Fire extinguishers	missing or insufficient numberinspection label missingvalidity of inspection period expired	
9.3.	Anti-theft devices / theft warning system	missingdamagedinoperable, operation impaired	
9.4.	Warning triangle / flashing alarm lamp	missingdesign contrary to regulationsdamagedflashing alarm lamp inoperable	
9.5.	First-aid kit	missinginadequately equipped	
9.6.	Wheel chocks	 missing or insufficient number damaged wrong size attachment defective, securing device missing or ineffective 	
9.7.	Audible warning system	missinginadmissibleinoperableeffect insufficient	
9.8.	Speedometer	missinginoperabledamagedillumination inoperable	
9.9.	Tachograph / control device	 missing inoperable damaged fitting plate missing or invalid seal damaged inspection date expired 	
9.10.	Speed limiter	 missing inoperable damaged test certificate missing or expired tampering possible 	

10. ADDITIONAL INSPECTIONS OF VEHICLES FOR THE COMMERCIAL CARRIAGE OF PASSENGERS

ltem		Principal Reasons for Rejection	
10.1.	Entrances and exits	 no marking lighting device missing or inoperable passenger doors cannot be opened from inside emergency actuating device missing or inoperable clamping protection device inoperable or clamping force too high; protective trim missing or defective control device for door end-lock position missing or inoperable installations for observing entrances and exits (e.g. mirrors) missing or damaged power-controlled boarding aids contrary to regulations 	
10.2.	Emergency exits	 no marking of emergency exits / emergency actuating devices number / size insufficient access limited actuating device ineffective emergency hammers missing 	
10.3.	Floor covering and steps	damaged (danger of stumbling)not sufficiently slip resistant	
10.4.	Driver's seat and seats for the accompanying personnel	 barrier missing or contrary to regulations seats for accompanying personnel contrary to regulations sun visors missing or damaged 	
10.5.	Seats / standing places / sleeping accommodation, aisles	 statement of permissible number of seats / standing places / sleeping accommodation missing or wrong arrangement of seats or their anchorage contrary to regulations prescribed restraint system missing or damaged sleeping accommodation contrary to regulations aisles too narrow 	
10.6.	Handholds	too few attachment unsatisfactory	
10.7.	Passenger communication system	optical / acoustic signal system missing or inoperable	
10.8.	Interior lighting	- missing, insufficient or inoperable	
10.9.	Destination sign, route sign, line number	missinglighting missing or inoperable	

	Item	Principal Reasons for Rejection
10.10.	Heating / ventilation	 missing or functioning unsatisfactorily emission of poisonous exhaust gases in driver's place / passenger compartment
10.11.	Fire extinguisher / first-aid kit	 missing or not in sufficient number wrong place of installation information signs missing or damaged no test labels on fire extinguisher, or test period expired content of first-aid kit not in conformity with regulations