

Conditions for carrying out repairs to railway undertakings' rolling stock on designated tracks managed by ŽSR

The list of transport points with designated tracks on which it is possible to carry out repairs to the railway undertakings' rolling stock (RS) within the specified range is given in Table 1.

The following conditions must be complied with by the railway undertaking (including the contracted maintenance workshop) when the vehicles are stationed or before the vehicles intended for necessary repairs are stationed to the extent specified:

A) Railway transport safety

- 1) the repair of RS on the designated tracks must not be carried out without the consent of the relevant authorized transport staff of ŽSR,
- 2) the RS repair must preferably be carried out only on the designated tracks listed in Table 1 and incorporated in the operating regulations of the respective railway stations;
- 3) the railway undertaking must carry out all measures resulting from the relevant provisions of ŽSR Z 1 Railway operation rules (coverage of stationary rolling stock in accordance with Article 149 and Article 150), securing the RS in accordance with this and the relevant RS operating instructions,
- 4) repair of RS must be carried out by the railway undertaking in accordance with the maintenance documentation, including the technological procedures of the RS concerned, and with the requirements of the maintenance regulations; Technological procedures shall enable and address the safe performance of repairs on the track outside facilities dedicated to the maintenance or repair of rolling stock (workshops, repair shops, etc.);
- 5) when repairing the RS, the railway undertaking shall ensure that the following cannot occur:
 - a) jeopardizing the safety and fluidity of rail transport;
 - b) impairing the stability of RS;
 - c) damage to transported goods,
 - d) pollution of railway infrastructure,
 - e) disruption of clearance gauge on adjacent running tracks,
 - f) breach or damage of railway infrastructure structures and equipment.

B) Occupational safety and health (OSH)

The tracks designed to carry out repairs to railway undertakings' RS are the joint workplace of ŽSR and the railway undertaking. The employees concerned must be informed of this fact in such a way as not to jeopardise each other's performance of their professional activity. In the case of accidents, the procedure is in accordance with ŽSR Op 22 Occupational accidents, other accidents, dangerous events, occupational diseases. ŽSR may supplement or extend OSH conditions in view of possible changes or findings of new facts.



For all repairs to railway undertakings' RS on designated tracks managed by ŽSR, the following conditions must be observed by persons carrying out activities related to RS repairs:

- 1) have a valid competence from OSH within the scope of the 'BPR' and within the scope of the 'BPD' (in the case of the performance of works towards an adjacent operating track and the handover of the Safety Label) within the meaning of the ŽSR Z 2 Regulation on the Safety of Employees in the Conditions of Železnice Slovenskej republiky;
- 2) have a valid medical fitness within the meaning of Section 10 of Decree of the Ministry of Transport, Construction and Regional Development of the Slovak Republic No. 245/2010 Coll.,
- 3) have a valid competence test – 17/2 within the meaning of ŽSR Regulation Z 3 Professional competence at ŽSR;
- 4) have a valid electrical engineering competence in the scope of at least 'Instructed person' within the meaning of Article 24 of the ŽSR Z 3 Regulation Professional competence at ŽSR,
- 5) have a valid notification and information within the meaning of Section 3 of Decree of the Ministry of Labour, Social Affairs and Family of the Slovak Republic No. 147/2013 Coll. for work at height;
- 6) for the removal of RS and for repairs at the place of removal of RS, it is possible to carry out activities only within the scope of Annex 13 AVV LIST OF REPAIRS WHICH MAY BE CARRIED OUT AT THE LOCATION OF THE WAGON REMOVAL OR IN THE IMMEDIATE VICINITY, regardless of the reason for the removal of the wagon,
- 7) have a valid permit for entry into the track circuit managed by ŽSR within the meaning of the ŽSR Z 9 Regulation Authorization for entry into the track circuit managed by ŽSR,
- 8) ensure own safety within the meaning of regulation Z 2 Safety of employees in the conditions of Railways of the Slovak Republic (through the relevant transport employees) before starting work activity in the operating area,
- 9) have developed technological procedures for the work;
- 10) in cases where a wagon master or other employee (e.g. a wagon locksmith, etc.) carries out work on rolling stock with a traction unit suspended in a place or manner where its safety could be endangered by the movement of that rolling stock, he must ensure his own safety by means of the warning label 'DO NOT MOVE!' by handing this label over to the driver of the rolling stock in question,
- 11) on a given track, when performing the displacement with the repaired RS, the maximum allowed speed of the rolling stock at such a location is 5 km/h,
- 12) determine the method of landing and handing over, as well as the method of securing parked RS,
- 13) not enter the area of potential danger to the adjacent track at the time of rolling stock movement,
- 14) respect the free running and handling space on all tracks when shutting down road vehicles as well as auxiliary equipment necessary for the repair of RS;



15) personnel carrying out maintenance or repair of rolling stock are obliged, in order to ensure the safety of their own and that of other persons, to observe, among other principles, the following principles:

- a)** in the case of dangerous and complex works on RS, which must be carried out at a height, namely at the place where the employee is forced to change his/her working position, it is the duty of the employee to ensure against falling from a height in accordance with the provisions of the relevant safety regulations, e.g. STN 34 3109, electrotechnical regulations, safety regulations for operation on and in the vicinity of the track line and Decree of the Ministry of Labour, Social Affairs and Family No 147/2013 Coll. for work at height,
- b)** use steps, ladders or steps to exit and descend rolling stock;
- c)** transport old and damaged parts of rolling stock (sheets, plates, etc.) in such a way as not to injure persons,
- d)** chop hard material or weld it so that the chopped fragments do not injure co-workers or other persons (for this reason, screens should be placed appropriately),
- e)** not to drop elastics and bumpers dismantled from bogies to the ground (ensure their removal by crane or trolley adapted for this purpose),
- f)** when repairing rolling stock without dismantling the elastics, reliably secure these elastics against ejection (two or several handrails made for this purpose);
- g)** to maintain a safe distance from places where repairs are carried out on RS components exposed to spring pressure (bumper repair) so that persons are not injured by the sudden ejection of RS components,
- h)** repair and maintenance of the air circuit of rolling stock shall be carried out only after compressed air has been discharged,
- i)** repairs to the electrical equipment of rolling stock shall be carried out after ensuring the low-voltage status of the circuits in question, with the exception specified in STN EN 50 153 in voltage bands I and II for at least instructed persons,

16) comply with all legal standards to ensure the safety of work under traction guidance.

C) Ecology

Repairs to railway undertakings' RS on designated tracks managed by ŽSR and in the area around them may be carried out after the conditions laid down in generally binding legislation on environmental care have been met. These include Act No 79/2015 on waste and amending certain acts, as amended, and related implementing regulations, Act No 364/2004 on water and amending Slovak National Council Act No 372/1990 on infringements, as amended (the Water Act), Act No 543/2002 on nature and landscape protection, as amended, and related regulations, in particular Decree No 200/2018 of the Ministry of the Environment of the Slovak Republic laying down details on the treatment of pollutants, the particulars of the emergency plan and the procedure for dealing with exceptional water deterioration, as amended. The conditions that must be met depend on the nature of the activities carried out. The RS repair



activity must not generate excessive noise that would negatively affect the environment at the site. After the repair of the RS is completed, the track and the area must remain clean, free of waste and pollution. In the event that the railway undertaking detects pollution of the track or of the area during the installation of a vehicle for repair, it is obliged to report this fact to the transport employees of ŽSR.

D) Scope of repairs that can be carried out on specified tracks managed by ŽSR according to the requirements for the repair site:

1. Repairs possible on any track without access to a service vehicle (mobile/service workshop)

a) Electric traction locomotive

- replacement of fire extinguishers,
- repair or replacement of the horn (whistle) – only outside the contact line;
- compressor – repair of electrical control, removal of minor air leaks,
- repair of electrical circuits, replacement of signaling light bulbs or reflectors outside the contact line,
- by type of minor repairs in the brake rod,
- replacement of screwdriver,
- replacement of blocks, base units, signal repeaters, identification units,
- replacement of the speedometer, traction,
- renewal of the inscriptions on the locomotive cabinet,
- replacement of measuring instruments,
- repair of minor electrical faults in the charging circuit,
- replacement of wipers,
- repair of the heating of the unit,
- replacement, welding a chair,
- exchange of circuit breakers, fuses,
- repair of minor electrical faults in the cooling fan circuit,
- repair of minor electrical failures in the circuit of transformer oil pumps,
- repair or replacement of oil pressure switches,
- replacement of wedge belts,
- replacement of suspension dampers (vertical),
- damaged running surface of wheelsets – abrasion of wedges.

b) Motor traction locomotive

- repair or replacement of the horn (whistle) – only outside the contact line;
- compressor – repair of electrical control, removal of minor air leaks,
- repair of electrical circuits, replacement of signaling light bulbs or reflectors outside the contact line,
- by type of minor repairs in the brake rod,



- replacement of screwdriver,
- replacement of blocks, base units, signal repeaters, identification units,
- replacement of the speedometer, traction,
- minor leaks in the fuel circuit, replacement of the fuel tube, injection pump,
- renewal of the inscriptions on the locomotive cabinet,
- replacement of measuring instruments,
- repair of minor electrical faults in the charging circuit,
- replacement of wipers,
- repair of the heating of the unit,
- replacement, stooling,
- exchange of circuit breakers, fuses,
- repair of minor electrical faults in the cooling fan circuit,
- slight leaks in the oil circuit,
- minor leaks in the hydrostatic circuit,
- replacement of wedge belts,
- replacement of suspension dampers (vertical),
- damaged running surface of wheelsets – abrasion of wedges.

c) Freight wagons - circulation

- visual inspection of the wheelset,
- re-measurement of the wheelset,
- inspection of hoop wheels,
- inspection and/or wiping of the bearing chamber,
- replacement of a wheelset sink (T-piece),
- tightening of the wheelset sink (T-piece),
- insertion of a bolt into the locking trap of a wheelset (T-piece),
- tightening the screw of the torn bowl,
- Replacement of the outer spring – empty wagon;
- replacement of the spring damper plate – empty wagon;
- Replacement of the spring damper plate – empty wagon;
- visual inspection of the manganese insert,
- replacement of manganese,
- wheelset hoop – renewal of control marks,
- restoration of damaged (tanned) coating of monoblock wheelsets - thermally affected continuous wheelset;
- bearing lid leaking – cleaning,
- instalation of a grounding cable.

d) Freight wagons – brake

- fixing of broken mechanical parts (welding or temporary);
- replacement of locking cap, brake spacer hinge,



- insertion of pins into the brake spacer bolts, insertion of brake spacer fuse bolts,
- Attachment of the bolt of the brake assembly in general,
- fitting of pins in general to the bolts of the whole brake assembly,
- replacement of main pipe hose coupling,
- repair of brake changer P/L, G/P,
- lubrication of gear changer P/L, G/P,
- replacement of brake block, insertion of missing brake block,
- insertion of the missing wedge, coils into the wedge of the brake block,
- replacement of the brake block holder,
- checking the sealing valve – AKH
- replacement of the brake valve – AKH,
- replacement of the handbrake wheel or repair of the handbrake,
- the measurement of the wheelset and the drawing up of the report,
- temporary repair of pipes (blinding) without repairing the brake,
- brake adjustment according to UIC 543-1.

e) Freight wagons - wagon bottom

- the measurement of the height of the buffers,
- bumper lubrication,
- tightening of bumper screws,
- replacement of bumper screws,
- grounding repair,
- repair or replacement of the glider, fitting, fixing of glider screws,
- insertion of the draw gear support plate screw,
- replacement of threaded coupler,
- replacement of draw hook,
- repair or replacement of the hook guide,
- replacement of screwdriver.

f) Freight Wagons - wagon cabinet

- repair of inscriptions on the wagon,
- makeshift repair of the wagon body (door, sliding walls, side post – securing, running) not under contact line, without welding,
- replacement of the handle for displacement, fitting the screw into the handle for displacement,
- replacement of the sticker box, the signal holder, the riser and other trifles,
- repair, deployment of jumped-out sliding walls, doors.

g) Freight wagons - other

- security search within the meaning of the Freight wagon maintenance system (SÚNV),



- checking the ability to drive without a valid revision in accordance with the AVV,
- checking the ability to drive above the load limit in accordance with the AVV,
- checking the ability to drive in the event of in-service irregularities within the meaning of the AVV,
- inspection after the accident event for transport to the workshop,
- all AVV inspections marked with "*",
- inspection of the bumping device,
- examination of the condition of the brake blocks,
- pre-measurement of freight wagon, locomotive after accident event,
- extension of the revision by +3 months.

2. Repairs possible only on specified tracks (Table 1) with the possibility of accessing a service vehicle (mobile/service workshop)

a) Electric traction locomotive

- replacement of fire extinguishers,
- replacement of BP, BS2 (braking system), switchboards, pressure gauges,
- Periodic maintenance of grade O.

b) Motor traction locomotive

- replacement of fire extinguishers,
- replacement of BP, BS2 (braking system), switchboards, pressure gauges,
- periodic maintenance of grade O.

c) Freight wagons - circulation

- cutting of wedges for transport to the workshop,
- replacement of a wheelset when lifted unilaterally by a crane or by means of its own lifting device,
- loosening the wagon,
- loosening of wagon bogies,
- loosening of a wheelset,
- replacement of the outer spring – loaded wagon;
- replacement of the spring damper plate — loaded wagon,
- replacement of the spring damper plate – loaded wagon;
- exchange of leaf spring,
- replacement of coil spring,
- unilateral untying of wagons allowing for this,
- welding of manganese lining plates,
- replacement of a wheelset with a Hegenscheidt, Lukas and HASCH lifting device,
- exchange of bogies, torn bowl.



d) Freight wagons – brake

- repair or replacement of the brake pulley,
- replacement of the brake clutch,
- replacement of the load cell air hose,
- brake test using the EKA device,
- replacement of brake switchboards, release devices, brake cylinders, brake block separators,
- replacement of the control rod of the automatic setter,
- removal of leaks on the brake system,
- pressure brake test according to UIC 543-1,
- replacement of the switchboard,
- replacement of the auxiliary valve.

e) Freight wagons - wagon bottom

- replacement of the bumper,
- makeshift repair - longitudinal weld (partition) for transporting empty freight wagons to freight wagon repair shop,
- replacement of the spring of the glider and part of the glider,
- replacement of towing device, draw spring,
- repair, replacement of towing suspension or replacement of complete towing equipment.

f) Freight Wagons - wagon cabinet

- temporary repair of the wagon body (door, sliding walls, side post – locking, running), also by welding, not under the contact,
- repair of punctured/deteriorated wagon cabinets (patch).

g) Freight wagons - other

- wagon alignment, locomotive after an accident event;
- installation of an auxiliary trolley – emergency rearrangement of freight wagons, locomotive by means of a towing auxiliary trolley.

3. Repairs possible only in equipment intended for the maintenance or repair of rolling stock (workshop, repair shop, etc.)**a) periodic maintenance of stages M, V, H,****b) prescribed revisions****c) other repairs at the discretion of the wagon owner that cannot be carried out by a service workshop**

Table 1

List of transport points with designated tracks on which repairs to railway undertakings' RS can be carried out

Regional Directorate	Transport point	Designated tracks (remarks)
OR Košice	Kysak	<ul style="list-style-type: none"> - special purpose track no. 18 from Se 10 to the stopper (129 m), - special purpose track no. 20 from Se 13 to stopper (155 m) (subject to prioritisation of activities for which the tracks are already used)
	Plaveč	<ul style="list-style-type: none"> - handling track no. 10 (498 m), km 1.350 - km 1.680 (section without OCL) - handling track no. 204 (134 m), full length bounded by Vk4a - stopper. (subject to prioritisation of activities for which the tracks are already used)
	Rožňava	<ul style="list-style-type: none"> - handling track no. 10 (343 m), usable length from Se16 to track weight is 168 m (subject to prioritisation of the activities for which the track is set)
	Veľká Ida	handling track no. 6 (300 m long, subject to the condition of loading and unloading wagons)
	Vranov nad Topľou	track no. 8 (140 m)
OR Trnava	Bratislava east station	23aSm, 25aSm
	Galanta	12, 14 (preferring loading and unloading, weighing)
	Kúty	104, 106
	Nové Zámky	305, 306 (preferably loading/unloading and consignments under customs control)
	Sereď	9, 11, 13



		(with limit on unpaved area, track 9a with priority for loading/unloading)
	Štúrovo	7
OR Žilina	Liptovský Mikuláš	handling track no. 9 (221m, general loading and unloading track)
	Žilina Teplička	handling track no. 653 (333m)
OR Zvolen	Hronská Dúbrava	9b (with partial restriction)
	Levice	9
	Lučenec	16
	Zvolen freight station	12, 302c
	Žiar nad Hronom	6, from traction support 26 to traction support 30, approx. 100-120 m (preferring the use of railway tracks and structures section)

