

Ремонт візків Barber S-2-R vs модель 18- 100



АТ «Дніпровагонрембуд»



- Рік заснування: 1898
- Розташування: м. Дніпро (ст. Нижньодніпровськ)
- Спеціалізація: ремонт та виготовлення рухомого складу та його комплектуючих



АТ «Дніпровагонрембуд»



- Ремонт пасажирських вагонів та їх комплектуючих
- Виготовлення рам та балок візків



АТ “Дніпровагонрембуд”



- Ремонт усіх типів вантажних вагонів та їх комплектуючих
- Формування колісних пар
- Ремонт гальмівного обладнання



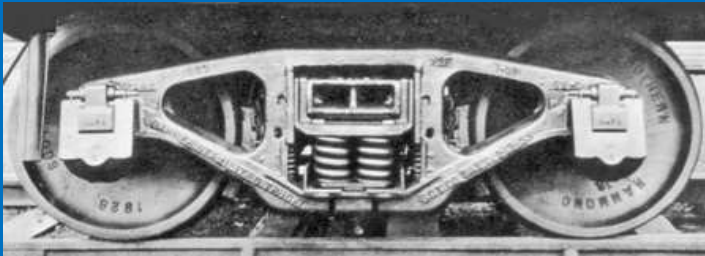
АТ «Дніпровагонрембуд»



Візок моделі 18-9810



Візок Barber



Barber S-1 (початок 1930-х)



Barber S-2 (кінець 1930-х)



Barber S-2 (роликові підшипники)



Візок Barber



75% вагонного парку США і понад 90% парку Канади та Мексики оснащені візками сімейства Barber компанії Standard Car Truck (США)



Візок моделі 18-100



Введений в експлуатацію в СРСР на початку 50-х років під назвою ЦНІІ-Х-0



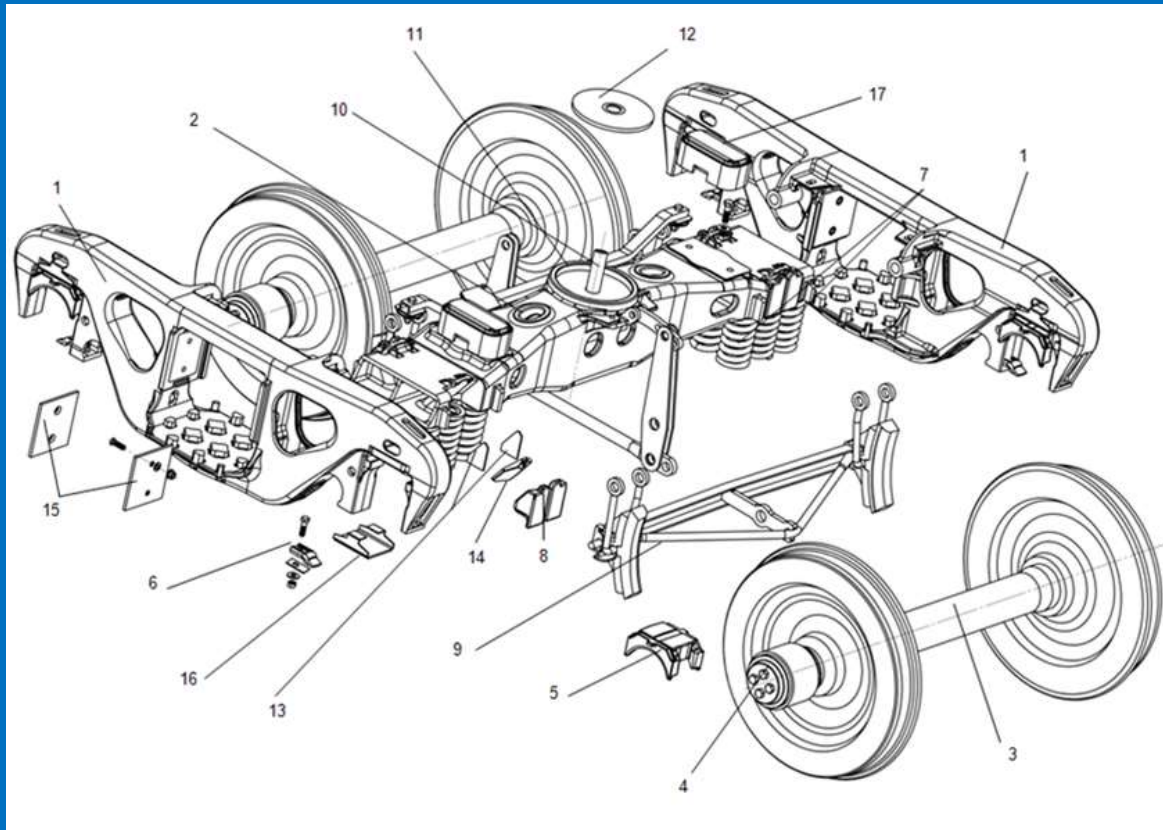
Візок моделі 18-9810 (Barber)



- Збільшення міжремонтного пробігу до 500 тис. км.
- Збільшення терміну служби зносостійких елементів до 1 млн. км.
- Зниження вартості життєвого циклу в 2 рази порівняно з візком 18-100



Візок моделі 18-9810 (Barber)



Технічна документація по ремонту візків в Україні

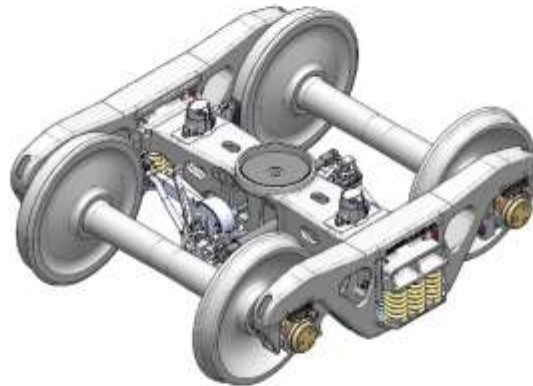
- Сфера застосування
- Нормативні посилання
- Вимоги безпеки (охорона праці)
- Охорона довкілля
- Іспити
- Вилучення з інвентарю
- Зразок посвідчення на право ремонту
- Форми документів на списання деталей і т.п.



Технічна документація по ремонту візків в США

Maintenance Manual

September 2023 Revision

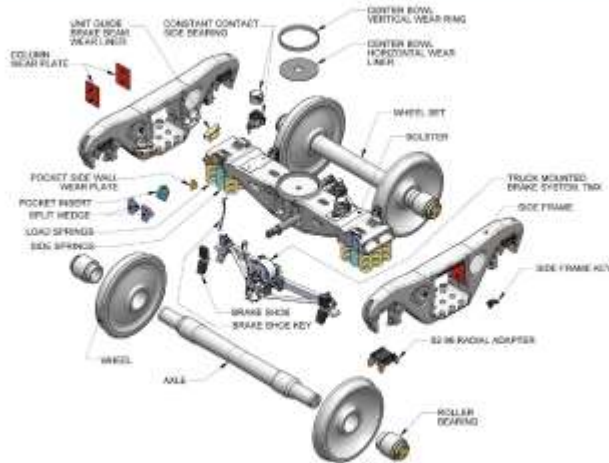


6400 Shafer Court, Ste. 450, Rosemont, IL 60018 U.S.A.
Phone (847) 692-6050 Email: SCTTechCustomerService@Wabtec.com



Технічна документація по ремонту візків в США

Barber Stabilized Truck Component Diagram



Wabtec, Standard Car Truck

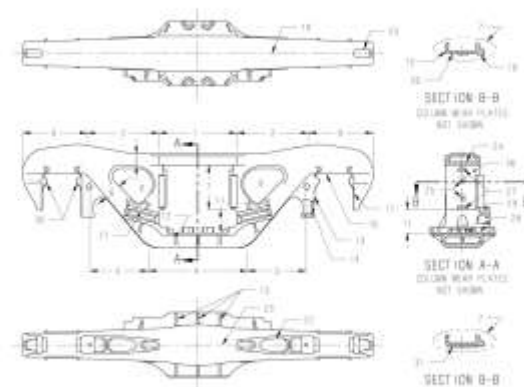
8000 State Road - Top 100 Warehouse, Denver CO 80231, U.S.A.
Phone: 847.883.0300 Email: E.C.T.technical@wabtec.com

Always Use Original
Barber Parts

10

Side Frame Nomenclature

1. Top Member Center
2. Compression Members
3. Compression Member Flanges
4. Bottom Center
5. Diagonal Tension
6. Tension Member Flanges
7. Columns
8. Windows
9. Top Ends
10. Sides of Column
11. Lower Sclater Opening
12. Spring Seat Flanges
13. Spring Seat Ribs
14. Retainer Key Slot
15. Inner Pedestal Legs
16. Pedestal Roof
17. Outer Pedestal Legs
18. Sclater Anti-Rotation Lugs
19. Parking Line - Top Member
20. Top End Openings
21. Lin Guide (Brake Beam) Brackets
22. Bottom Center Drain Holes
23. Parking Line - Bottom Member
24. Top Member Bridge
25. Wear Plate Retainer Holes
26. Column Face
27. Column Wear Plate Retainer Beads
28. Spring Seat
29. Spring Seat Bosses or Lugs
30. Pedestal Thrust Lugs
31. Column Wear Plate



Wabtec, Standard Car Truck

8000 State Road - Top 100 Warehouse, Denver CO 80231, U.S.A.
Phone: 847.883.0300 Email: E.C.T.technical@wabtec.com

Always Use Original
Barber Parts

11



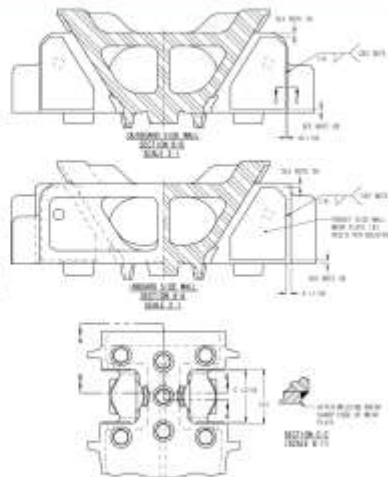
АТ «ДНІПРОВАГОНРЕМБУД»

Технічна документація по ремонту візків в США

Booster Pocket Sidewall Wear Plate Installation Procedure

Sidewall Wear Plate Installation Procedure

- Pocket sidewall surface must be smooth, true, dry, and at a temperature over 50° F (ambient grade C).
- Position wear plate on pocket sidewall surface as shown in sections A-A and B-B such that:
 - The horizontal distance from the wear plate to the pocket edge is held within ±1/32.
 - Vertical distances:
 - For 7 x 12 S-2HD applications, position bottom wear plate edge 1/4 ± 1/32 from bolster spring seat.
 - For all other applications, the vertical dimensions between the wear plate edges and the top and bottom casting edges shall be equal within ±1/16.
- Tack weld pocket sidewall wear plate in place and check position.
- Pocket sidewall wear plate should be adjusted, or removed and repositioned if:
 - Conditions as outlined above in note 2A and 2B are not satisfied.
 - A 1/32" x 3/8" shim will fit between the wear plate and pocket sidewall more than 3/4" deep. In this condition, it may be necessary to grind the sidewall surface to insure a proper seat.
- Position bolster for downhand welding and avoid overheating during welding.
- Welding shall be done in accordance with AAR specifications, in a workman like manner, be homogeneous, and free of gas and foreign inclusions.
- Weld should be continuous along top of wear plate, along all outside edges, and along bottom of wear plate.
- Inspect bolster pockets to be sure wear plate, insert, sidewalls, and spring seat are free of weld spatter, burrs, and sharp edges.
- Welding consumable:
 - Grade B castings: AWS E-7018, 5/32" max diameter, dry.
 - Grade B castings: AWS E-8018, 5/32" max diameter, dry.
 - Grade C castings: AWS E-9018, 5/32" max diameter, dry. See AAR test manual AAR 82 for requirements regarding grade C castings.



Truck Type	Boasting	Wear Plate	A	B	C	D
S-2C	6 x 11	5/16	18	16	5.24	5.15
	6 1/2 x 11	5/16	18	16	5.24	5.15
	6 1/2 x 11	5/16	11/32	16	5.24	5.15
S-2AD	7 x 12	5/16	11/32	16	5.24	5.15
	7 x 12	5/16	11/32	16	5.24	5.15
S-2AD-B	6 1/2 x 11	5/16	11/32	16	5.24	5.15

(Designed for use with bolster padbolts 813084)



Wabtec, Standard Car Truck

8000 State Court - Ste. 300, Rosemead, CA 91076, U.S.A.
Phone: 917.802.6999 Email: ECTEchnicalCustomerService@wabtec.com

Always Use Original
Barber Parts

8-C1

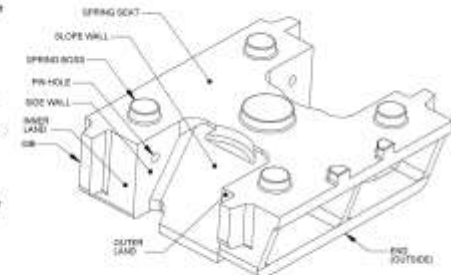
Booster Restoration Procedures

- This specification is intended for use in conjunction with AAR rule 47 and AAR M-214 as a guide to the repair of all Barber stabilized truck bolster ends including wear plate application and weld buildup of worn surfaces. Bolsters meeting the reconditioning requirements of these procedures meet the bolster end requirements for classification as reconditioned according to M-214. For assistance with these or any other Barber maintenance manual procedures, contact Wabtec engineering support.
- Booster Repair Preparation Inspection:
 - Check bolster for cracks and gouges. If bolster is cracked or gouged, refer to rule 47 and M-214 for further instructions.
 - Check bolster center bowl for wear and condition of any wear liner(s). Center bowls exceeding the wear limits in rule 47 and M-214 must be reconditioned before reuse.

Electrode Used For Welding	ELECTRODE RECOMMENDATION		
	Grade B	Grade B+	Grade C
Flux Core (All Welding)	E7018-DF 5/16" WRE or E711-D 5/16" WRE or E711-A 1/8" WRE	E8118-C 5/16" WRE	E9018-DF 5/16" WRE or E911-D 5/16" WRE
Gas Metal Arc Welding	E7018-DF 5/16" WRE or E711-D 5/16" WRE or E711-A 1/8" WRE	E8018-DF 5/16" WRE or E811-D 5/16" WRE or E811-A 1/8" WRE	E9018-DF 5/16" WRE or E911-D 5/16" WRE or E911-A 1/8" WRE

11000 Denver
2700 W. 29th CO.
The United States

- Booster End Repair Preparation Procedure:
 - For weld repair and application of steel wear plates, determine bolster material type. The grade of steel is indicated in the AAR identification number as AAR B, AAR B+, AAR C, or AAR C+. Refer to section 1, General Information, for more information on bolster markings.
 - Prepare bolster for gage checking and repair by placing bolster bowl side down for easy access to bolster pockets. Position bolster to allow angle space above and below bolster end(s) for grinding and weld application. Positioning bolster upside down on an elevated work surface with ends extended out away from work surface offers the best access to worn bolster end surfaces. Remove all debris from gaged surfaces.



Wabtec, Standard Car Truck

8000 State Court - Ste. 300, Rosemead, CA 91076, U.S.A.
Phone: 917.802.6999 Email: ECTEchnicalCustomerService@wabtec.com

Always Use Original
Barber Parts

8-C1



Технічна документація по ремонту візків в США

Boilster Pocket Slopewall Gages



Gage No.	Truck Type	Bearing Size**	Wear Plate Part No.	Wear Plate Drawing
BK-1885-1	9-2-A	3 x 8	213	5095
BK-1885-2	9-2-A	8 10 x 10	213	5095
BK-1885-3	9-2-A	6 x 11	213	5095
BK-1885-4	9-2-A	7 x 13	214	5205
BK-1885-5	9-2-C	3 x 8	212	5095
BK-1885-6	9-2-C	8 10 x 10	213	5095
BK-1885-7	9-2-B	8 10 x 12	219	5205
BK-1885-8	9-2-D	8 10 x 12	219	5205
BK-1885-9	9-2-B	7 x 12	219	5205
BK-1885-10	9-2-B	6 x 11	219	5205
BK-2027-1	9-2-B	8 10 x 12	219	5205
BK-2027-2	9-2-B	6 x 11	219	5205

* Low conveyance truck with D-4 springs. For all other 9-2-B boilers use 9-2-C gages.

** All 6 1/2 x 12 gages apply to 6 1/2 x 9

Refer to section 5-A for application of gages checking for wear. Refer to section 5-C for application of gages checking a restored boiler pocket.



Wabtec, Standard Car Truck

6000 Maple Court • 1st Floor, Rosemead, CA 91078, U.S.A.
Phone: (627) 263-2200 • Email: SCS71car@wabtec.com

Always Use Original
Wabtec Parts

441

Barber Side Frame Column Inspection & Restoration Guide

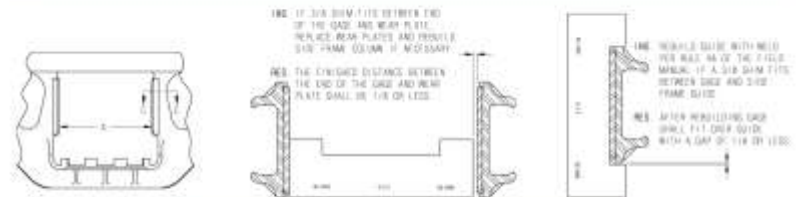


FIG. 1 IF 3/16 INCH FITS BETWEEN END OF THE GAGE AND WEAR PLATE, REPLACE WEAR PLATE AND PROVIDE 5/16" FRAME COLUMN IF NECESSARY.

FIG. 2 THE CLEARED DISTANCE BETWEEN THE END OF THE GAGE AND WEAR PLATE SHALL BE 1/8" OR LESS.

FIG. 3 WEAR PLATE SHALL BE WITHIN 1/16" OF THE WEAR SURFACE OF THE FITTED GAGE. IF A 3/16 INCH FITS BETWEEN GAGE AND 5/16" FRAME COLUMN.

FIG. 4 AFTER REBUILDING GAGE SHALL FIT OVER GUIDE WITH A GAP OF 1/16 TO 1/32."

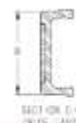
Truck Type	Capacity	A Min.	B Max.	Gage Number
9-2-A	50 Ton	12 1/2" (A)	3 1/2"	98-1380-1
	80 Ton Water Level	12 1/2" (A)	3 1/2"	
	80 Ton Low Conveyance	14 1/2" (A)	3 1/2"	
9-2-B	70 Ton	10 1/2" (A)	3 1/2"	98-1380-4
	130 Ton	10 1/2" (A)	3 1/2"	
	70 Ton Water Level	10 1/2" (A)	3 1/2"	
	130 Ton Water Level	10 1/2" (A)	3 1/2"	
9-2-C	125 Ton	10 1/2" (A)	3 1/2"	98-1380-1
	150 Ton	17 1/2" (A)	3 1/2"	98-1380-7
9-2-B	130 Ton	10 1/2" (A)	3 1/2"	98-1432
	130 Ton	18 3/8" (A)	11 1/8"	98-1380-2
9-2-E	70 Ton	10 1/2" (A)	30 1/2" (B)	98-2280
	130 Ton	17 1/2" (A)	11 3/8" (B)	98-2324



SECTION C-C (STANDARD)



SECTION C-C (1/2" GAP)



SECTION C-C (1/4" GAP)



Wabtec, Standard Car Truck

6000 Maple Court • 1st Floor, Rosemead, CA 91078, U.S.A.
Phone: (627) 263-2200 • Email: SCS71car@wabtec.com

Always Use Original
Wabtec Parts

441



АТ «ДНІПРОВАГОНРЕМБУД»

Технічна документація по ремонту візків в США

Foundry Identification Markings

Manufacturer	Initials	Monogram	Manufacturer	Initials	Monogram	Manufacturer	Initials	Monogram
APC/AMCO Technologies Crescent	HAMBIC (Z)	HOPE	Boyard Die	BC	B	Hoppe Stamp	HBBWA	H
Alstom Park			Canadian Steel Foundries	ASP or ASP & CASCAN or CASP	HOPE	Ohio Castings Co. Altoona	ACC	A
Alstom			CND Karna Iron, A.S.	CND	I	Chicago Casting Co. Lakes	CCC	C
			Coburns	HOPE		Clear Steel Foundry Co.	CSF	CS
AMP Worldwide Alstom	ASP	A	Continental Steel Castings	CSC	C	Flint of Windsor Steel	FSF	HOPE
London City	ASP	O				Griffin	GC	HOPE
East St. Louis	ASP	E				Isabrown	IS	HOPE
Alstom	ASP	SM				ICAW	HOPE	S
						Scullin	HOPE	S
						Silber	HOPE	S
						Singer	HOPE	S
Headford Special Hobas	HOPE	H-K	Industria (Germany)	DIWASCO	D	South African Railway	S.A.R.	S
Huron (Sweden)	HOPE	H-R	Industriale (Birmingham/Sheffield)	INDALI	I	Statens	SI	HOPE
Miller Steel Corp	HOPE	S	Fabrica Nacional de Vigas	FAN	HOPE	Sveinsson	SS	S
			Hendrick	HENDRICK	HOPE			
Danabrook Cast	HOPE	D	Hydralize Engineering & Inventions LTD	HDC	HE	Walker	HOPE	W
			Hydralize Development Corporation (USA)					

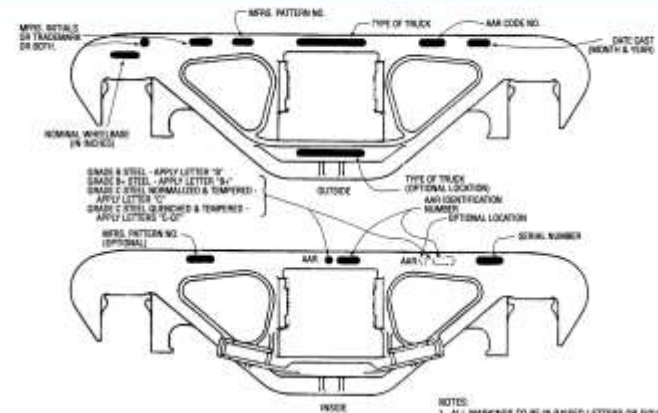
Wabtec, Standard Car Truck

3000 Barber Court - Ste 400, Florence, MA 01039, U.S.A.
Phone: (413) 582-4700 - Email: SCLT.Tech.Doc@wabtec.com

Always Use Original
Barber Parts

1-10

Side Frame Marking Diagram



- NOTES:
1. ALL MARKINGS TO BE IN RAISED LETTERS OR FIGURES. NOT LESS THAN 3/16" HIGH, PREFERABLY 1/2" HIGH.
 2. MARKING LOCATION SHOULD CONFORM GENERALLY TO THE AREAS INDICATED.
 3. AIR IDENTIFICATION NUMBER MUST BE CAST INTEGRAL TO THE CASTING.
 4. IF SIDE FRAME IS A COMBINATION, TYPE OF TRUCK MAY BE OMITTED IF PROPERLY CODED.

Wabtec, Standard Car Truck

3000 Barber Court - Ste 400, Florence, MA 01039, U.S.A.
Phone: (413) 582-4700 - Email: SCLT.Tech.Doc@wabtec.com

Always Use Original
Barber Parts

1-10



АТ «ДНІПРОВАГОНРЕМБУД»

Сесія «Технічні регламенти»



Юрій Посулько



Роман Мицько



Дмитро Єгоров

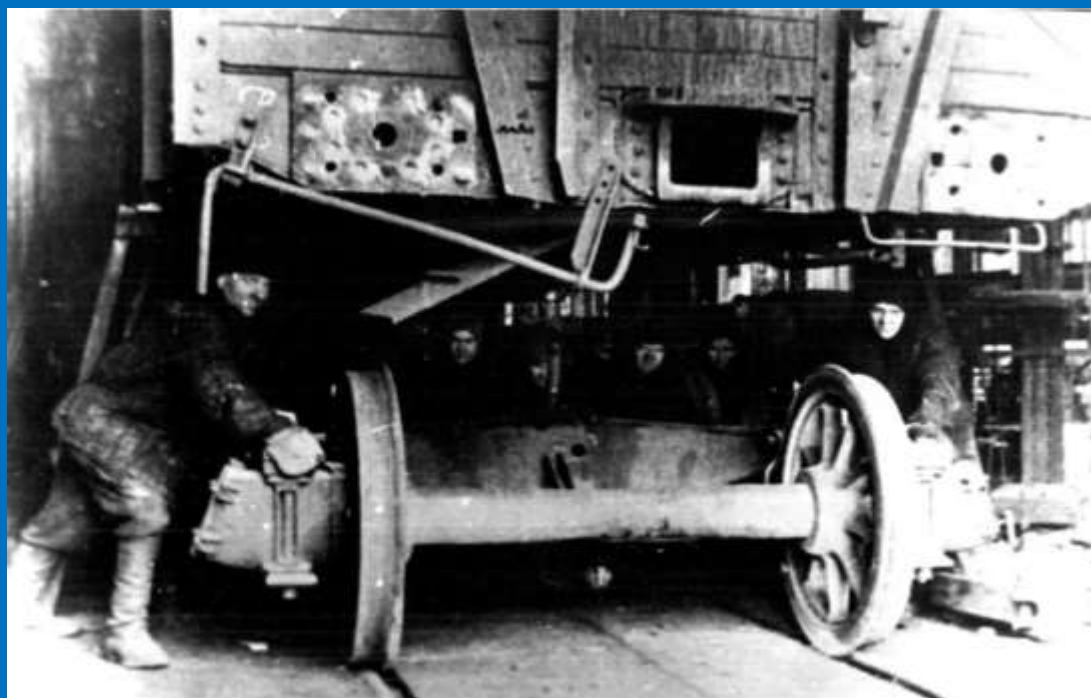


Тетяна Трипольська



Руслан Кириченко





Дякую за увагу!



АТ «ДНІПРОВАГОНРЕМБУД»