POCL 556

Instruction
Justification : Safety

Managing Director
The engineering **link** Limited
Room 27 Trent House
London Road
DERBY DE24 8UP

Managing Agent for Railtrack for Private Owner Registration Agreements

Telephone (01332) 262754
Fax (01332) 263686

Ref R&C/Y25/RT

Date 19 September, 1996

SAMBRE ET MEUSE Y25 CAST FRAME BOGIES - EXAMINATION AND RENEWAL OF SIDE BEARER SPRING SEATS

1. Introduction

Cracks have been found in the base of pre 1986 cast side bearers on Sambre et Meuse Y25 bogies. Owners are advised to visually examine the castings for signs of cracking and to monitor the growth of existing cracks. Severe cracking may lead to the need to replace the side bearer seat castings with a stronger, modified version available from Sambre et Meuse.

2. Visual Examination For Cracks

It is recommended that this examination is carried out as a minimum at the annual VIBT.

Following application of all appropriate safety procedures, examination for cracks may be made from beneath the bogie. Any contamination on the underside of the side bearer seat casting should be cleaned away, any cracks may then be observed with the aid of a torch.

Cracks have been found in the following locations (See Figure 1):

i) Cracks in the weld attachment of side bearer seat to the bolster.
ii) Cracks as i) above extending into the side bearer seat casting.
iii) Cracks in the transition radius between the weld attachment to the bolster and the spring seat boss.
iv) Cracks around the spring seat boss.

3. Limits To Be Applied - Action To Be Taken

Maximum permissible crack lengths are:
25mm for cracks in the weld bead (i above)
40mm for cracks in the casting (ii, iii, iv above)

These limits are as recommended by Sambre et Meuse and SNCF.

If any cracks are discovered to exceed the maximum lengths stated above the vehicle must not be allowed to enter service.

Cracks in the weld bead should be repaired in accordance with Weld Procedure CR176 (Appendix 1).

Cracks in the spring seat side bearer can be repaired but this is not recommended. Instead the side bearer should be replaced with the modified version available from Sambre et Meuse, Part number 025154-/1 (arrangement drawing 187 M 1255 0033). The work should be carried out to Sambre et Meuse procedure PPR 00 Y25 which includes Weld Procedure CA125 (Appendix 2).

Owners are advised to contact Sambre et Meuse to ensure that the details of these procedures remain current.

NOTE:
The welds specified in CR176 and CA125 are the equivalents of the weld spec applied during original construction. As a "repair" these weld specifications should be supported by "Welding Procedure Approval Records" in accordance with BS EN 288. Sambre Meuse have been unable to supply such records, however specification CA125 is supported by an acceptance by SNCF dated 11/05/1990.

4. Suspension Clearance At Side Bearer (See Figure 2)

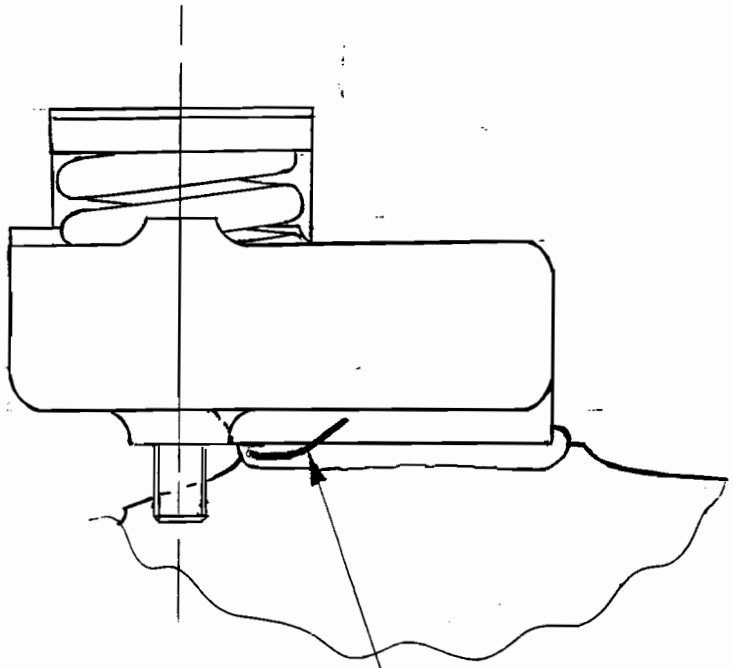
To minimise solid contact occurring on the side bearer stops, the clearances (averaged across the bogie) should be correctly adjusted. The correct clearance is 12mm +2 -0. This dimension cannot be readily measured directly, an indication of the clearance can be obtained by measurement 'X'.

The size of 'X' in the standard arrangement as shown in figure 1 is 40mm ± 1. However, in some cases, packing washers have been used beneath the stop, in which case the thickness of the washer should be added in order to calculate 'X'. This check may also be used to identify excessive wear at the centre pivot. Liner wear must be limited to a maximum of 3mm, as worn pivot liners reduce the suspension clearance.

Yours faithfully,

R Townend
Regulations and Claims Manager

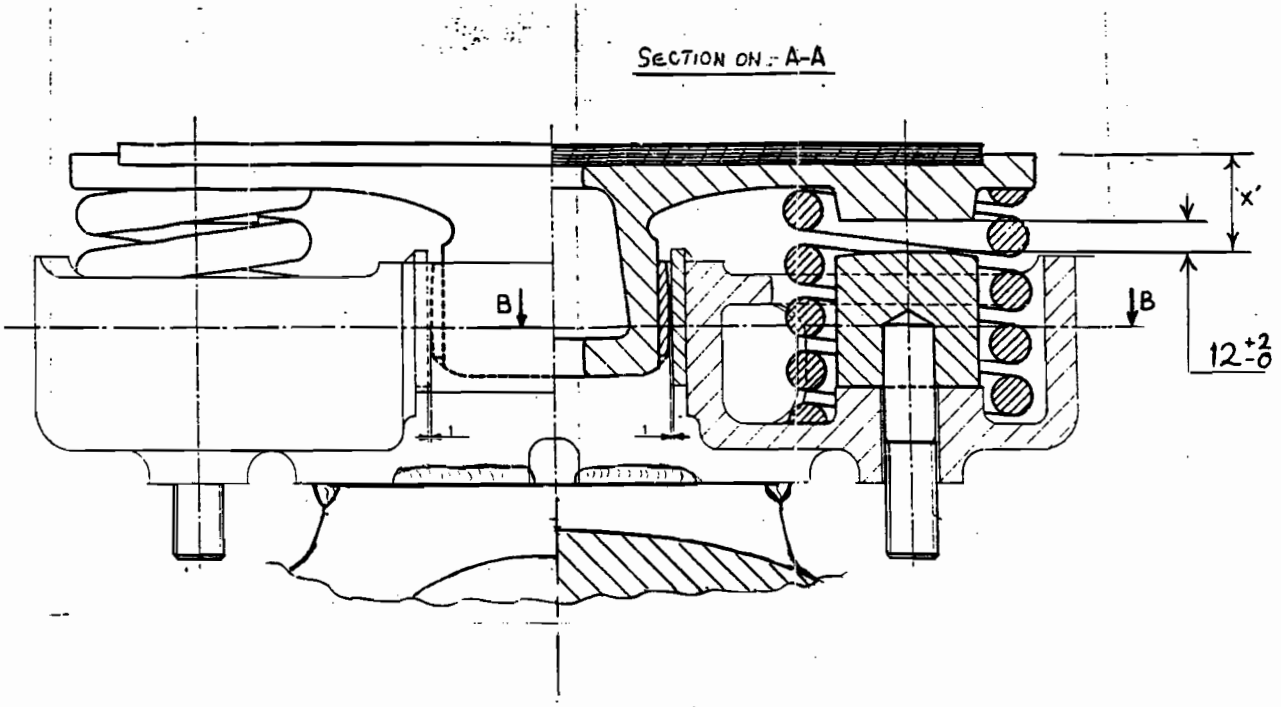
for A W Butler
Managing Director, The engineering **link**
Managing Agent for Railtrack for Private Owner Registration Agreements



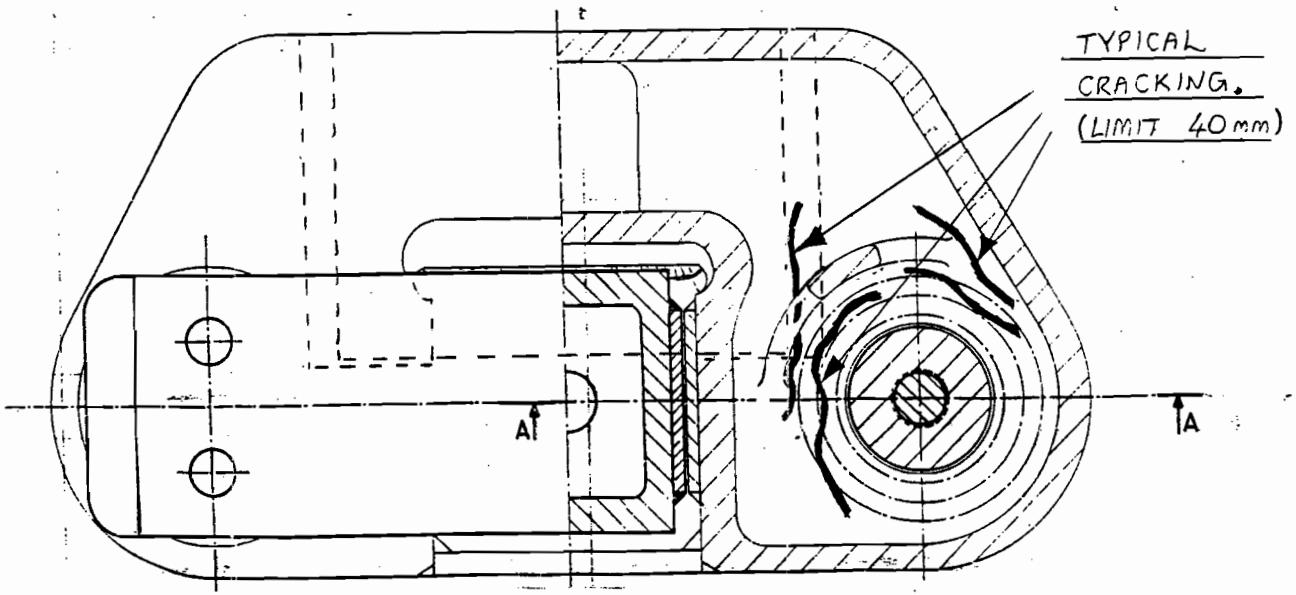
TYPICAL CRACKING

(LIMIT 25 mm IN WELD BEAD
LIMIT 40 mm TOTAL LENGTH
IF EXTENDING INTO CASTING)

SECTION ON A-A



SECTION ON B-B



TYPICAL CRACKING.
(LIMIT 40 mm)

FIGURE 1

SAMBRE ET MEUSE
FEIGNIES

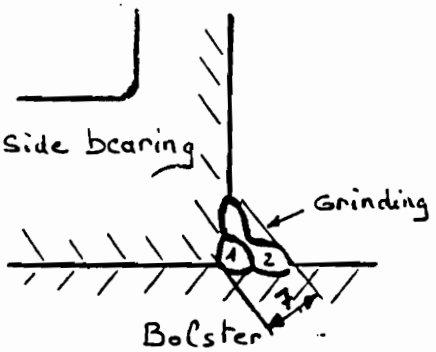
WELDING PROCEDURE SPECIFICATION

APPENDIX 1
PAGE 5 OF 6
Date 26/0.

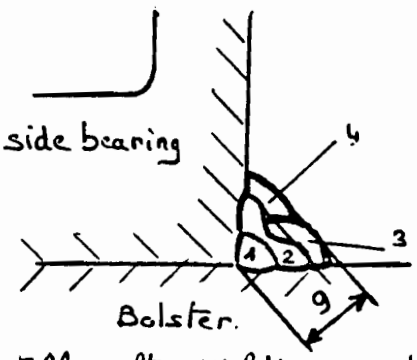
MODEL / CUSTOMER ..... — ..... PQR ..... —	W P S	Class	Weld Bea.
NORM ..... U.I.C. 897-1.3 ..... NORM ..... —	CR 176	B	9 D
CUSTOMER : ORDER :	ASSEMBLY FW	W. Process. 111	

PREPARATION | WELDING

Repairing the weld bead
CA 125



Contrôle before welding → LPE



Contrôle after Welding → LPE

PART N°	DRAWING N°	PART N°	DRAWING N°
BASE METAL :	Réf. Group	BASE METAL :	Réf. Group
THICKNESS :	Réf. Thickness	THICKNESS :	Réf. Thickness

Aréa Préparation — Paint — As Cast — X Grinding — Electric Arc — Gas cutting — Machining — Shearing

PASS Nbre 2	n° 3	n° 4	n°	n°	n°
TYPE of ~~ASSEMBLY~~ Repairing	Fillet welds	Fillet welds			
TYPE of WELDING	Manual electrode	Manual electrode			
WELDING POSITION	PB	PB			
WELD METAL — DESIGNATION	SAFER NF 510	SAFER NF 510			
SUPPLIER	SAF	SAF			
RM Amp(A.S.1) — SPECIFICATION	E 7018	E 7018			
Ø WIRE	—	—			
Ø ELECTRODE	4	4			
POLARITY +/-	+	+			
CURRENT =/	=	=			
WELD BEAD Pulled T - Pushed P	T	T			
Ø ELECRODE ∞ FUSIBLE	—	—			
GAS / FLUX of PROTECTION	—	—			
GAS FLOW (l/mn)	—	—			
WIRE SPEED (m/min)	—	—			
TENSION (V)	—	—			
INTENSITY (A)	160 A	160 A			
WELDING SPEED (cm/mn)	—	—			
HEAT INPUT (KJ/cm)	—	—			

- PREHEATING (C°) —
- INTERPASSES TEMPERATURE (C°) —
- POSTHEATING (C°) —

HEAT TREATMENT AFTER WELDING
☐ YES ■ NO ☐ PROTECTION

- INTERPASSES CLEANING: Brushing
- REMARKS: Welder's qualification : EN 287-1

Date 10.6.94.1 Name H. LECŒUCHE Signature

SAMBRE ET MEUSE
59750 FEIGNIES
Soudage

AMBRE ET MEUSE
FEIGNIES

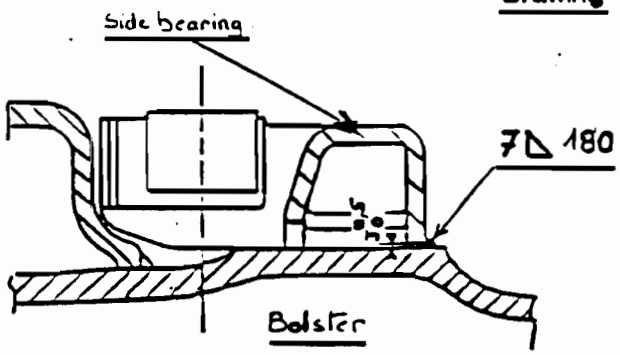
WELDING PROCEDURE SPECIFICATION

APPENDIX 2
PAGE 6 OF 6
Date 26/01/93

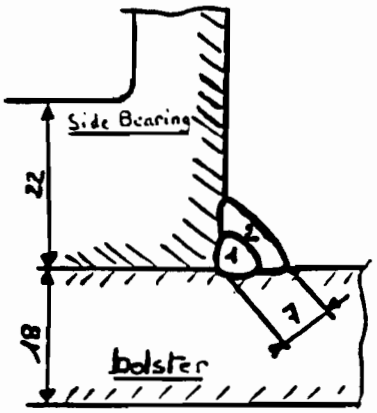
MODEL / CUSTOMER ..Cl../..90./.2A..... POR ..—.....	W P S	Class	Weld Bead
NORM .....U.I.C..897-13..... NORM ..—.....	CA 125	B	7Δ
CUSTOMER: ORDER:	ASSEMBLY FW	W. Process. 135	

PREPARATION

Drawing —



WELDING



PART N° — DRAWING N° —	PART N° — DRAWING N° —
BASE METAL : E 300 - 520 NS Réf. Group	BASE METAL : E 260 - 450 NS Réf. Group I
THICKNESS : 18 Réf. Thickness	THICKNESS : 22 Réf. Thickness —

Aréa Préparation: Paint — As Cast — Grinding — Electric Arc — Gas cutting — X Machining — Shearing

PASS Nbre 2	n° 1	n° 2	n° 3	n° 4	n° 5
TYPE of ASSEMBLY	Fillet welds	Fillet welds			
TYPE of WELDING	Semi Auto. MAG	Semi. Auto MAG			
WELDING POSITION	PB	PB			
WELD METAL — DESIGNATION	Nic 70 S	Nic 70 S			
SUPPLIER	SAF	SAF			
NORM — SPECIFICATION	ER 70 S 3	ER 70 S 3			
AWS A 5-18 — Ø WIRE	1²	1²			
Ø ELECTRODE	—	—			
POLARITY +/−	+	+			
CURRENT =/N	=	=			
WELL BEAD Pulled T · Pushed P	P	P			
Ø ELECRODE ou FUSIBLE	—	—			
GAS / FLUX of PROTECTION	Ar/Co2/O2	Ar/Co2/O2			
GAS FLOW (l/mn)	15-18	15-18			
WIRE SPEED (m/min)	—	—			
TENSION (V)	27-29	27-29			
INTENSITY (A)	290 ± 5%	290 ± 5%			
WELDING SPEED (cm/mn)					
HEAT INPUT (KJ/cm)					

PREHEATING (C°)	—
INTERPASSES TEMPERATURE (C°)	
POSTHEATING (C°)	

HEAT TREATMENT AFTER WELDING

☐ YES ■ NO ☐ PROTECTION

INTERPASSES CLEANING

REMARKS

AMBRE ET MEUSE
59750 FEIGNIES

Date 26.1.93 Name H. LECOCHE Signature
Soudage