

MT/240

British Railways Board

BRANDING OF WHEELS,
TYRES AND AXLES.



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MARCH 1994**

**BRANDING OF WHEELS,
TYRES AND AXLES**

**Second Issue
March 1994**

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Derby.**

REVISION RECORD

This Specification will be updated when necessary by the issue of amended pages accompanied by revision letters. The amended or additional part of re-issued pages will be marked with a vertical black line.

If either GM/TT0134 or GM/TT0083 are updated then this specification shall be reviewed to ensure that it meets the new/revised requirements.

If you consider that an amendment is necessary, complete BR Form 14298 and pass it to the local BRB Resident Engineer or Area Quality Engineer. Submission of a form does not authorise the proposed amendments.

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British Railways Board
The Railway Technical Centre
London Road
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DE24 8UP

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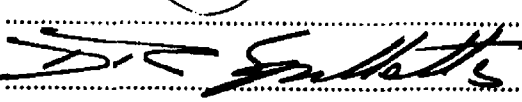
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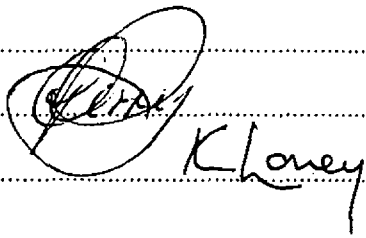
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T. Monkhouse

Director of T&RS Engineering for:

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INTRODUCTION

This document is concerned with branding of all wheels, tyres and axles used on rail borne vehicles on British Railways, including BR registered RIV vehicles and excepting foreign registered RIV vehicles which shall be in accordance with UIC Leaflets 810/811/812 and 813 for tyres, axles, wheels and wheelsets respectively, and is produced to standardise the procedures for all vehicle types, i.e. freight, locomotives, etc. For any further information regarding the manufacture of wheelsets, reference should be made to BS Spec. 5892 and BASS 502 'Code of Practice for the Use of BS 5892 - Wheelsets'.

Reference within this and all related documents to the Engineer shall refer to the authorised representative of the British Railways Board, and shall include the successors and assigns of such an organisation.

Reference within this and all related documents to the Contractor shall identify an organisation contracted for the purpose of undertaking the assembly and/or overhaul of wheelsets, and shall include the successors and assigns of such an organisation.

The information within this document supersedes the wheel and axle bearing branding procedures specified on the following drawings :-

<u>Description</u>	<u>Drg. No.</u>
Wagon assemblies	210
Carriage assemblies (Plain bearings)	SC/DE/1586
Carriage assemblies (Roller bearings)	SC/ES/14036
Locomotive assemblies	E/776

Each monobloc wheel, wheel centre, tyre and axle shall be legibly stamped in 6mm figures with the branding stipulated within this document. If it is considered necessary by the manufacturer 10mm figures will be acceptable at locations identified accordingly within the text.

The stamps used shall be scroll or block stamps and have no sharp edges or corners. Completion and filing of an axle record card BR9858/22 or equivalent, is deemed to be a declaration that the wheelset concerned complies with the Boards regulations and meets specification.

Under no circumstances shall an axle serial number be duplicated. In order that the serial number is unique the assembler's code where applicable must always be quoted as part of the axle serial number.

New manufacturers/assemblers, who have been prequalified/accredited by the Board as suppliers of wheelsets, shall obtain from Group Standards (M&EE), specific wheelset manufacture/assembler codes.

No deviations from this document are permitted without prior approval, in writing, from the Engineer.

All applicable statutory safety regulations shall be observed in applying this standard.

The operations shall be performed such that they do not constitute unacceptable hazards to any person from wheelset manufacture to withdrawal from service.

Any queries regarding the branding procedures shall be directed to :-

Interfleet Technology,
British Railways Board,
Trent House,
Railway Technical Centre
Derby

RELATED DOCUMENTS

ISO 1005, Parts 1-9	Specification for Wheelset Parts
UIC Leaflets 810/ 811/812 and 813	Technical Specification for the Supply of Wheelset Components
BS 5892, Parts 1-6	Railway Rolling Stock Material (Metric)
BASS 502	Code of Practice for the use of BS 5892 Wheelsets
WOSS 612/10	Wheelset Overhaul Procedures
BR 100*	Steel Tyres for Locomotives, Carriages, Cars and Wagons
BR 107*	Rolled Steel Disc Wheel Centres
BR 108*	Solid Rolled Steel Wheels
BR 167 (C52TS)*	Wheel and Axle Assemblies for High Speed Power Cars and Class 87 AC Electric Locomotives
BR 118A	Steel Castings - (Withdrawn)

Note: * BR Specifications identified are superseded by BS 5892 for all component renewals, unless otherwise agreed by the Engineer.

DEFINITIONS

RE-WHEELING/RE-TYRING	Replacement of any wheel, wheel centre or tyre, whether new or used, fitted to existing wheelsets.
HOT STAMPING	Stamping performed on the component in the heated state during manufacture.
COLD STAMPING	Stamping performed on the component while it is at an ambient temperature and in the finished condition.

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1. BRANDING OF WHEELS, TYRES AND AXLES: STANDARD PROCEDURES

1.1 Each authorised wheelset assembler shall be responsible for the following:-

- 1.1.1 To maintain a single register of all wheelsets assembled/repaired within their workshops.
- 1.1.2 To provide each new axle with a unique serial number, allocated from his own series of numbers. To accommodate imported special purpose vehicles, i.e. track-layers, or similar vehicles, the Civil Engineer (title to be clarified) will allocate axle serial numbers to the foreign manufacturer concerned and ensure Sub-Section 1.1.3. requirements are complied with, and the wheelset assemblers code allocated to him (CE), see Table 1, is used in all cases.
- 1.1.3 To ensure all wheels, wheel centres, tyres and axles, are branded in accordance with this document (except for foreign registered RIV vehicles) with particular attention being paid to the provision of the appropriate wheelset assembler's code, see Table 1.
- 1.1.4 To maintain an Axle/Wheelset Assembly record card filing system. To record information as detailed below:-
 - i) Record all the relevant details as required on the record card, see appendix I, or record the data on RAVERS as and when appropriate in accordance with specific instructions received from the Engineer. RAVERS recording system is for BR owned vehicles and any other system approved by the Engineer of recording is acceptable provided the system is registered with BR for audit purposes.
 - ii) Keep individual axle and wheel/tyre records for a minimum of 5 years from end of life of wheelset.
 - iii) On closure of Works and/or wheelset repair facilities, or reaching the period defined in ii) above, shall offer all wheelset assembly records to the Engineer.
- 1.1.5 When wheelsets require re-wheeling or re-tyring, the following procedures shall apply:-
 - i) Where it is considered that the axle serial number stamped on the axle is unique, e.g. the number consists of an assemblers code and a minimum of four digits, the repair assembler shall complete a new, or amend the original, axle record card as appropriate. The card shall be located in his filing system under a reference to the original assembler, as necessary. The axle end shall be stamped in accordance with this document, see Sections 8 and 9, with particular reference to the subsequent assembler's code*.

Note: * The subsequent assembler's code identifies when a wheelset has been repaired by a different Contractor to the 'Original Assembler'.

- ii) Where it is considered that the axle serial number stamped on the axle is not unique, e.g. the number consists of a maximum of three digits (Fig 10 illustrates a typical case), or an assemblers code is not present, the repair assembler shall allocate an axle serial number from his own number series and complete an axle record card as required for a new wheelset. Axle, wheel, wheel centre and tyre branding, as applicable, shall be obtained from each item, i.e. cast identity, year of manufacture, manufacturer's code, or other data as defined in this document. The previous axle serial number shall be noted. This data shall be recorded on the card and filed for reference purposes. The axle end shall be stamped in accordance with this document, see Sections 8 and 9.

NOTE : Axle serial number prefix's and suffix's different to those shown in this document may be found. This is historical, the important requirement is that the stamping is alpha-numeric and unique to that axle. Known obsolete axle number prefix's and suffix's are shown in appendix 2 for reference purposes only.

2. MANUFACTURE MARKINGS OF WHEEL CENTRES

The branding of wheel centres shall be in accordance with Fig. 1 below.

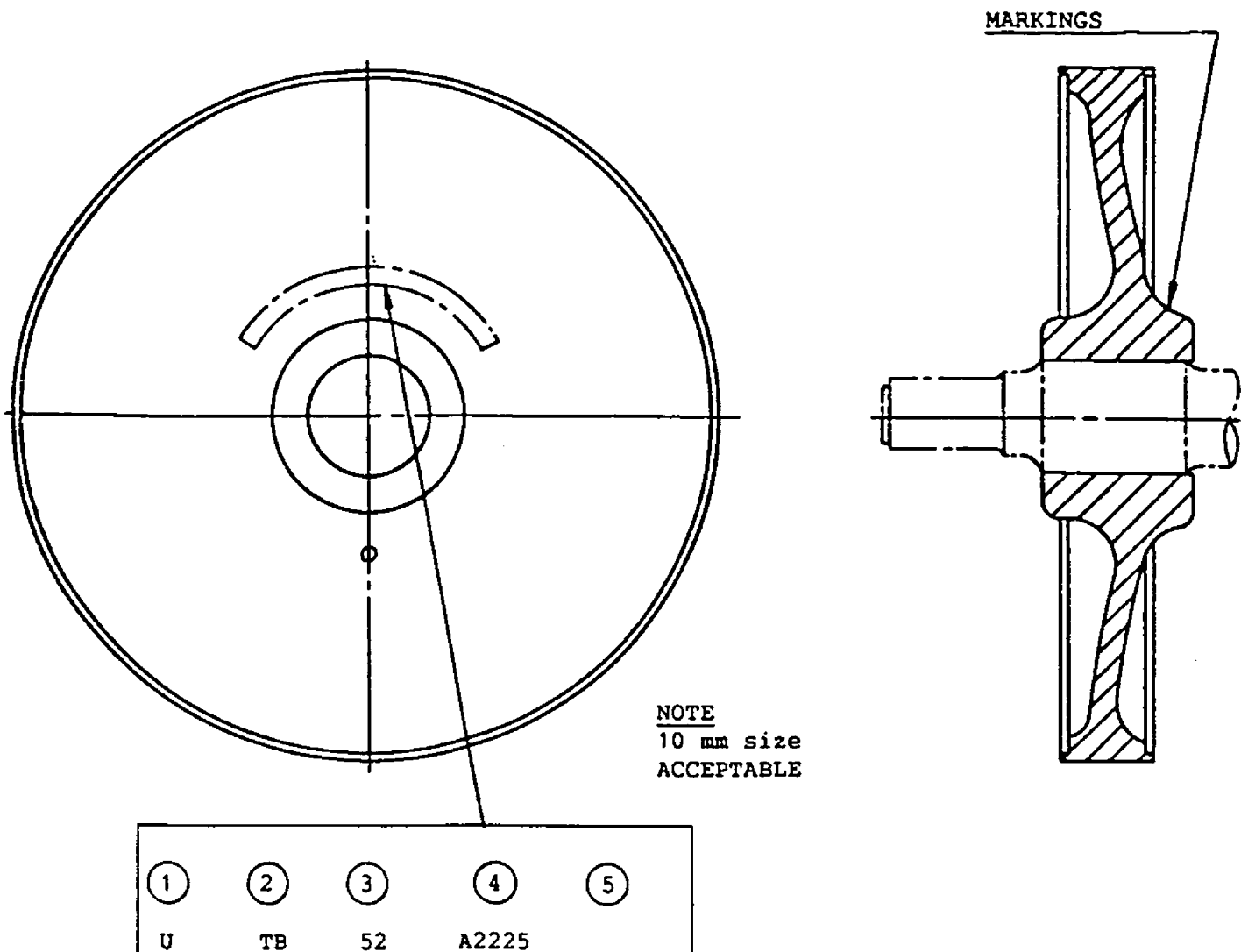


FIG. 1

- ① Class of material. (Table 4).
- ② Manufacturer's code. (Table 2).
- ③ Year of manufacture.
- ④ * Cast identity.
- ⑤ Inspector's stamp.

* Indicates stamping to be done HOT. If not practical then it is acceptable to COLD stamp in the location shown.

Note: It is preferred that the branding is located diametrically opposite the oil injection plug.

4. MANUFACTURE MARKINGS OF MONOBLOC WHEELS

The branding of monobloc wheels shall be in accordance with Fig 3 below

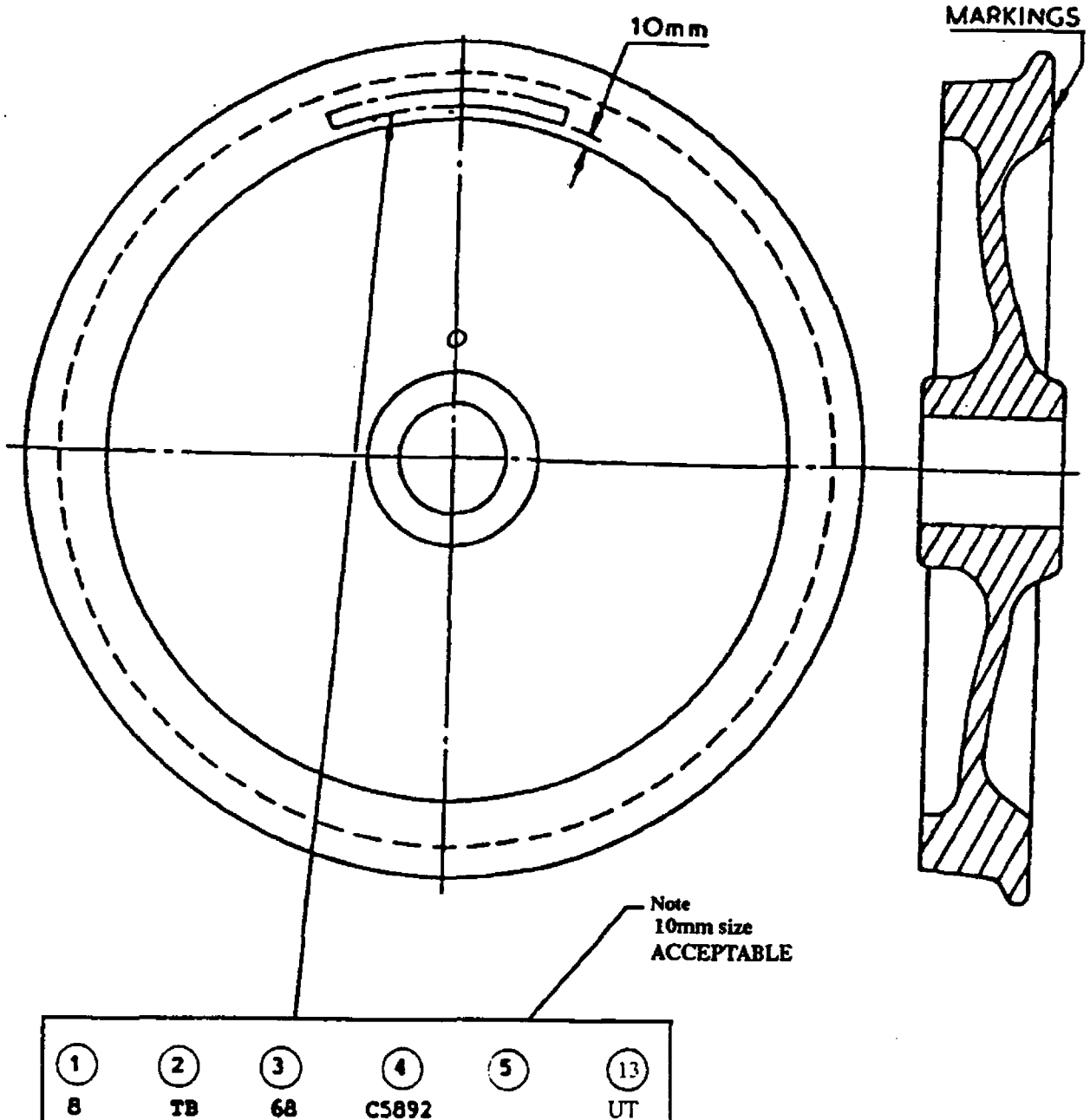


FIG. 3

- ① * Class of material. (Table 4).
 - ② * Manufacturer's code. (Table 2).
 - ③ * Year of manufacture.
 - ④ * Cast identity.
 - ⑤ Inspector's stamp.
 - ⑬ If the wheel rim has been ultrasonically tested for internal defects then "UT" shall be stamped after the inspector's stamp.
- * Indicates stamping to be done HOT.

5. MARKING OF AXLES

5.1 The branding of roller bearing axles and plain bearing axles, in forged condition, shall be in accordance with Figs 4 and 5 respectively, and details shown below.

Forged Condition

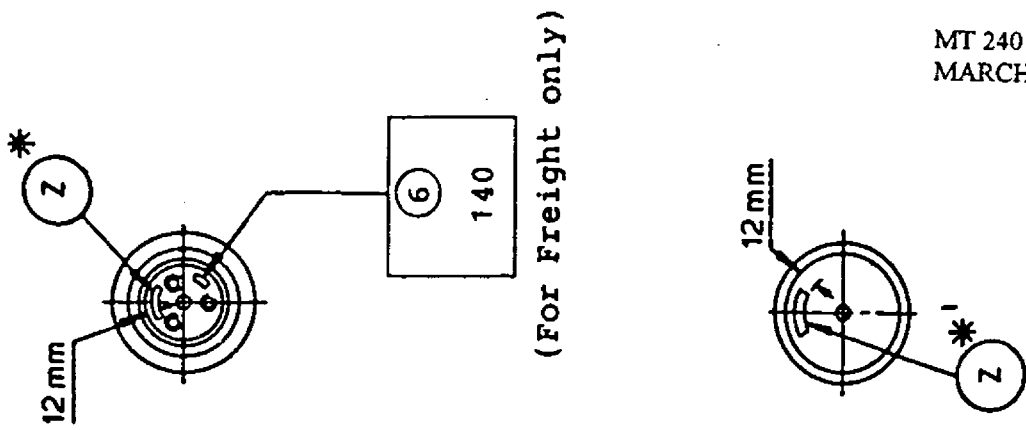
- | | | | |
|---|----------------------------------|---|--------------------|
| ② | Manufacturer's code. (Table 2) |) | |
| ③ | Year of manufacture. |) | |
| ④ | Cast Identity. |) | stamping light but |
| ⑤ | Inspector's stamp. (If required) |) | legible on one end |
| | |) | only. |

5.2 Before machining the wheelseat, markings ②, ③ and ④, shall be transferred to an axle record card. The axle serial number shown on the axle record card shall be cold stamped on the finished machined axle end (at one end only) in the position ⑤ appropriate to the axle concerned. In the case of driven axles this shall be at the gearwheel end of the axle. Note : For location of branding detail ⑥ on axles with axial end thrust pads see Section 8, Figs 8 and 9, applicable to roller bearing and plain bearing axles respectively.

Finished Machined Condition (See also Section 8)

In order to maintain identity, the branding for the finished axle shall be carried out as soon as the areas to be stamped have been finished machined.

- ⑥ Journals of 140 mm Dia. to be identified by stamping 140 both ends (freight vehicles only). Both ends to be painted white.
- ⑦ Axle serial number (from assembling contractor's number allocation).
- ⑧ Axle geometry code; if applicable, (see Sub-Section 10.1 and Table 3) to be cold stamped after the serial number.

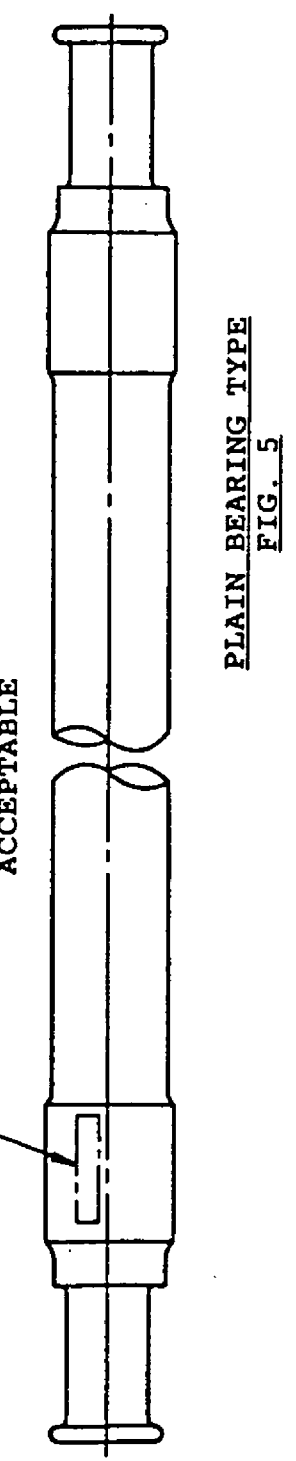


ROLLER BEARING TYPE
FIG. 4

(2)	(7)	(8)
*1	69323	R

NOTE
10mm size
ACCEPTABLE

PLAIN BEARING TYPE
FIG. 5



(2)	(3)	(4)	(5)
SP	52	B929	

NOTE *1 For location of branding detail (2) on finished machined condition axles with axial end thrust pads, see Section 8.

6. ASSEMBLY MARKINGS OF BOTH WHEELS
(WHEELSETS WITH MONOBLOC WHEELS)

6.1 The branding of assembly markings on monobloc wheels of a wheelset shall be in accordance with the following requirements.

6.1.1 The markings shall be on the inside face as shown in Fig. 6, however, where stamping is not practicable in this position due to the close proximity of the gearwheel to wheel, or for other reasons agreed by the Engineer, then it is acceptable to stamp at the outside location.

6.1.2 When a new axle is fitted, or the tread profile is changed, the previous branding on the wheel hub shall be peened out and erased by filing. The new data shall be stamped in the original position.

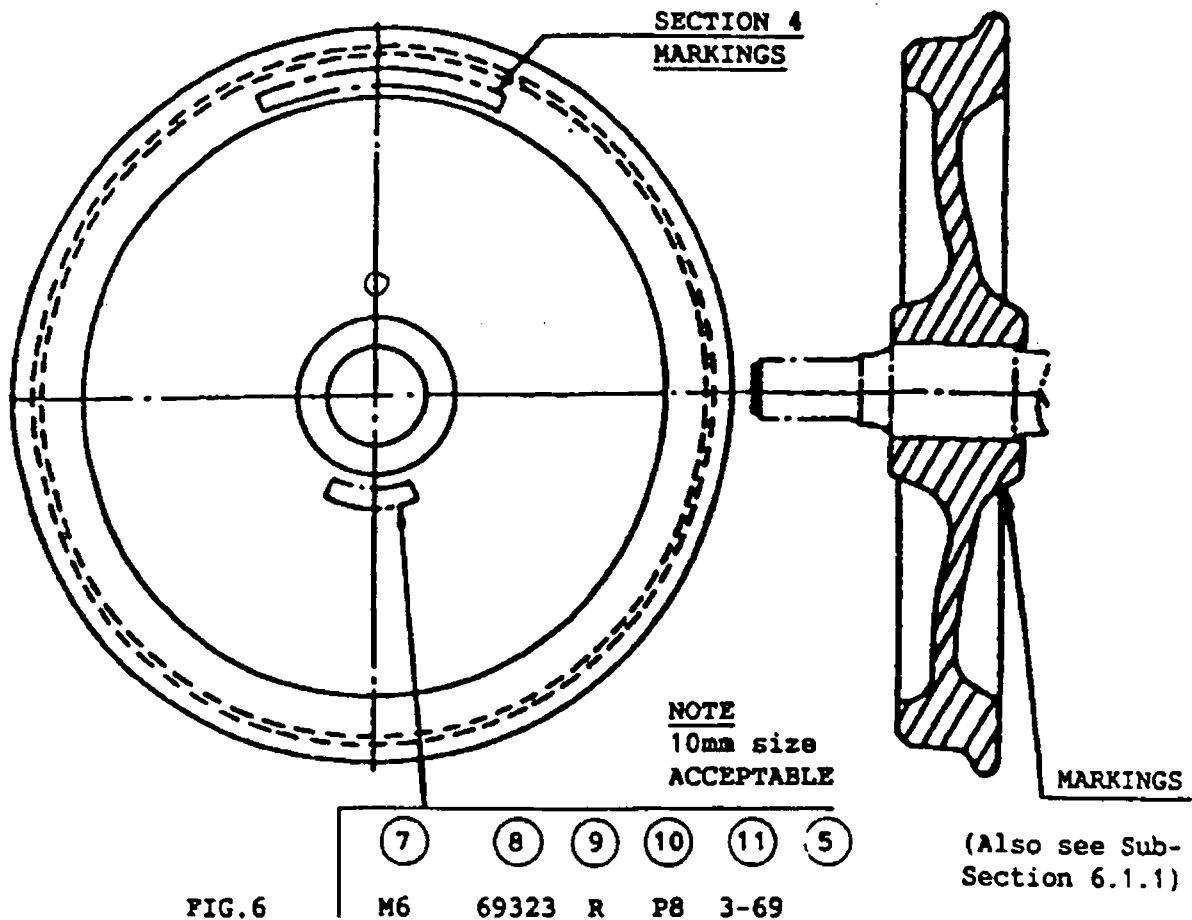


FIG.6

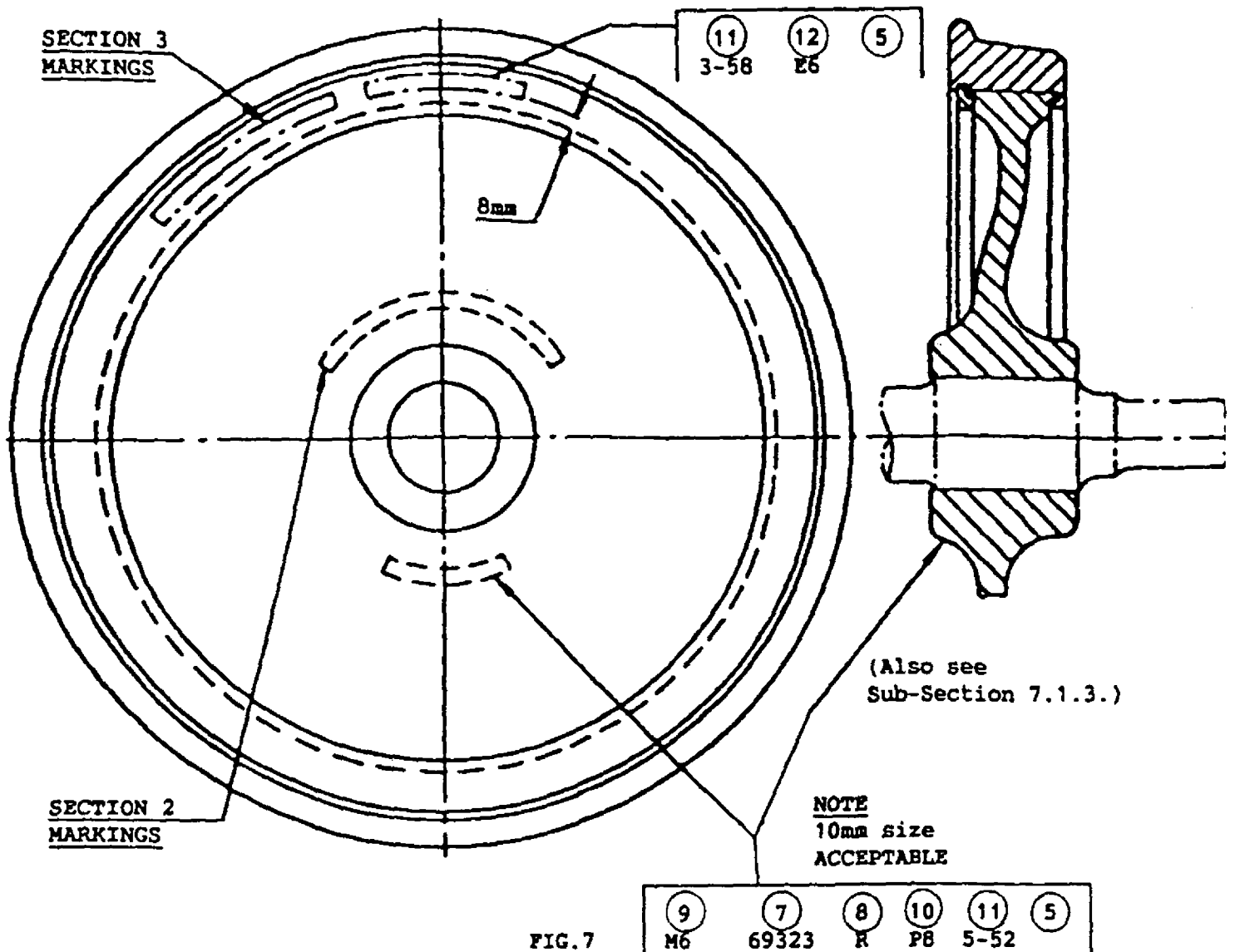
Note: The branding on the rim is to be diametrically opposite the branding on the hub and it is preferred that the branding on the hub is diametrically opposite the oil injection plug.

- (5) Inspector's stamp
- (7) Original assembler's code.
- (8) Axle serial number.
- (9) Axle geometry code (see Sub-Section 10.1 and Table 3) to be stamped after the serial number and the axle end identification letter 'A' if present.
- (10) Tread profile.
- (11) Date of assembly of wheelset.

7. ASSEMBLY MARKINGS OF BOTH WHEELS
(WHEELSETS WITH TYRED WHEELS)

- 7.1 The branding of assembly markings on tyred wheels of a wheelset shall be in accordance with the following requirements.
- 7.1.1 Markings on wheel centre hub inside face in accordance with Section 2. The assembly markings shall be on the inside face as shown in Fig. 7, however, where stamping is not practicable in this position due to the close proximity of the gearwheel to the wheel centre, or for other reasons agreed by the Engineer, then it is acceptable to stamp at the outside location.
- 7.1.2 Markings on tyre outside face shall be located adjacent to those provided in accordance with Section 3.
- 7.1.3 When a new axle is fitted, or a new tyre is fitted, or the tyre profile is changed, the previous branding on the wheel centre hub shall be peened out and erased by filing. The new data shall be stamped in the original position.

7. ASSEMBLY MARKINGS OF BOTH WHEELS
(WHEELSETS WITH TYRED WHEELS) Continued:



Note: The location of branding is diagrammatic, and may not necessarily be stamped as illustrated on existing wheelsets, but on renewal of wheel centres or tyres the stamping shall be diametrically opposite where practicable.

- ⑤ Inspector's stamp
- ⑦ Axle serial number.
- ⑧ Axle geometry code, (see Sub-Section 10.1 and Table 3) to be stamped after the serial number.
- ⑨ Original assembler's code.
- ⑩ Tyre profile.
- ⑪ Date of assembly of tyre or wheel centre as applicable.
- ⑫ Tyre assembler's code.

8. ASSEMBLY MARKINGS OF AXLES
(WHEELSETS WITH MONOBLOC OR TYRED WHEELS)

After the wheelset assembly has been completed then the axle end shall be branded in accordance with the following requirements.

NOTE

AFTER BRANDING IS COMPLETED THE AXLE END FACE SHALL BE DRESSED TO REMOVE ANY SURFACE IRREGULARITIES.

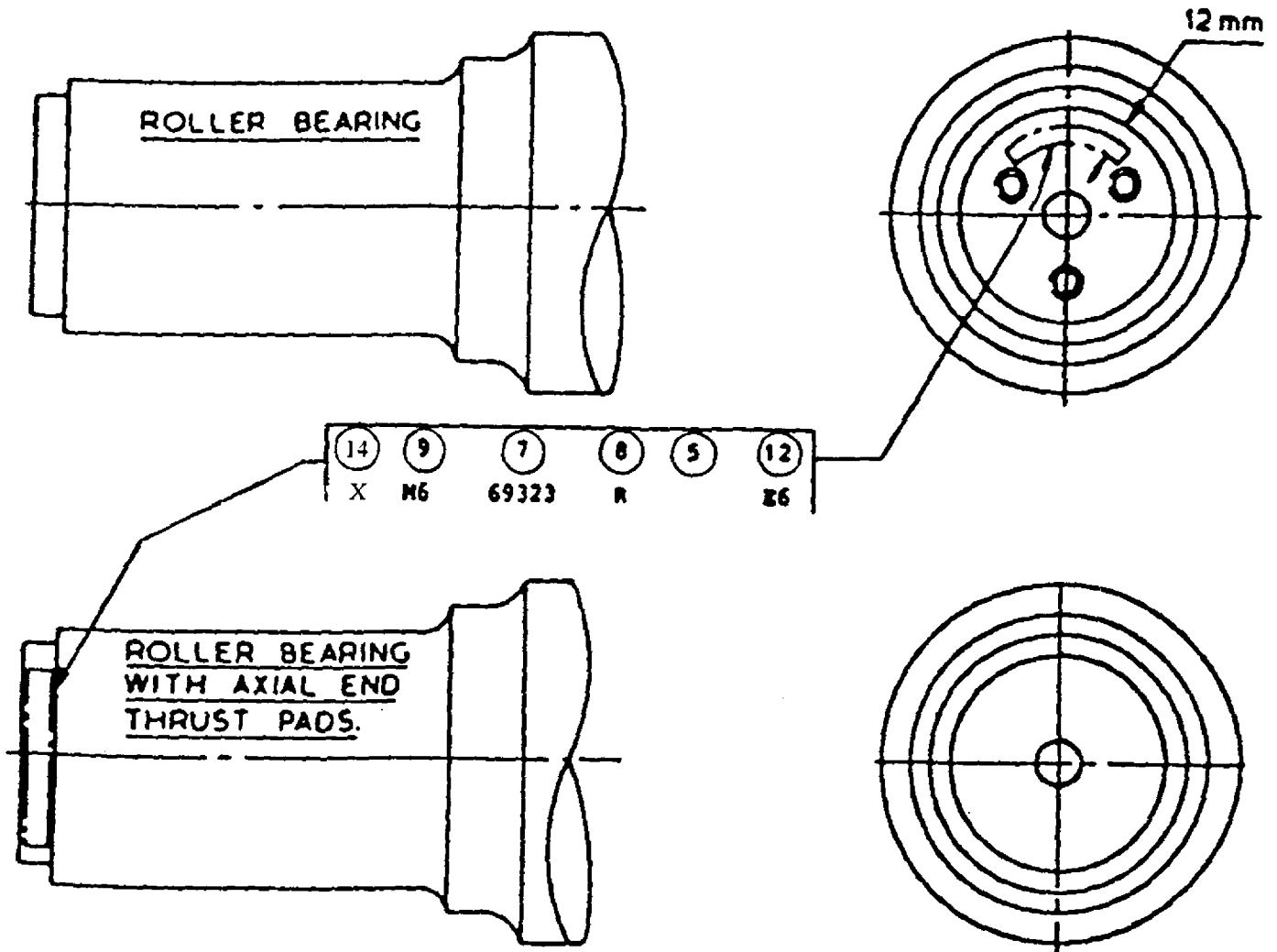


FIG. 8

- ⑤ Inspector's stamp. (applicable to initial assembly only)
- ⑦ Axle serial number.
- ⑧ Axle geometry code. (see Sub-Section 10.1 and Table 3) to be stamped after serial number.
- ⑨ Original assembler's code. (Table 1).
- ⑫ Latest subsequent assembler's code (Table 1). To be used when a wheelset has been repaired (Sub Section 1.1.5) by a different Contractor to the 'Original Assembler'.
- ⑭ Axles over forty years old from the date of manufacture shall be identified by stamping "X" in front of the original assembler's code at its next off vehicle attention.

(Continued)

8. ASSEMBLY MARKINGS OF AXLES
(WHEELSETS WITH MONOBLOC OR TYRED WHEELS) (Continued)

NOTE

AFTER BRANDING IS COMPLETED THE AXLE END FACE SHALL BE DRESSED TO REMOVE ANY SURFACE IRREGULARITIES.

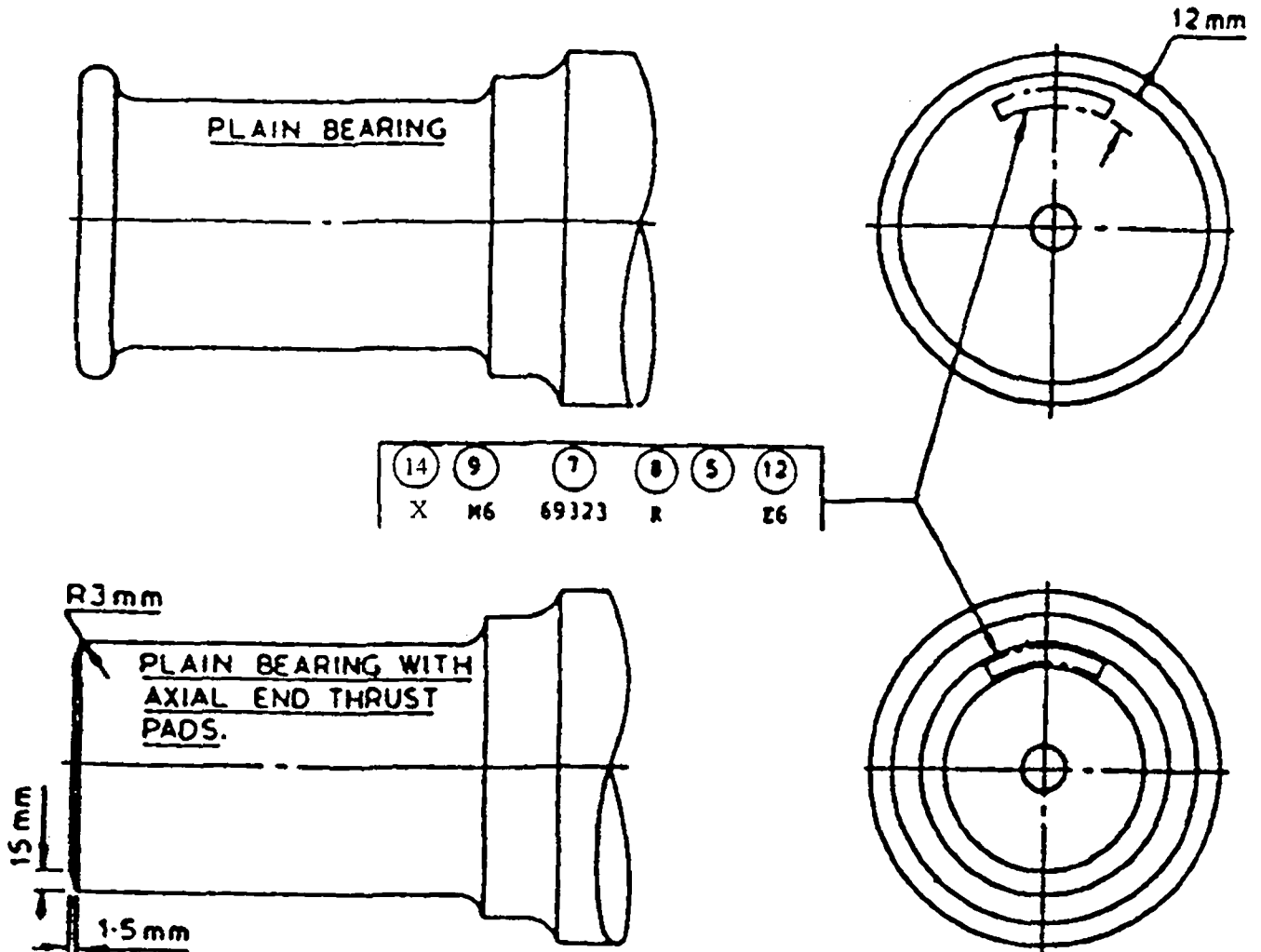


FIG. 9.

- (5) Inspector's stamp. (applicable to initial assembly only)
- (7) Axle serial number.
- (8) Axle geometry code. (see Sub-Section 10.1 and Table 3) to be stamped after serial number.
- (9) Original assembler's code. (Table 1).
- (12) Latest subsequent assembler's code (Table 1). To be used when a wheelset has been repaired (Sub Section 1.1.5) by a different Contractor to the 'Original Contractor'.
- (14) Axles over forty years old from the date of manufacture shall be identified by stamping "X" in front of the original assembler's code at its next off vehicle attention.

9. AXLE MARKINGS FOR RE-WHEELED/RE-TYRED WHEELSETS

9.1 When a wheelset is re-wheeled/re-tyred the existing axle markings shall be amended as specified in Sub-Section 1.1.5 and below.

9.1.1 The original proving thrust/pressing on tonnage, where applicable, shall be carefully peened out and erased by filing.

9.1.2 The assembly markings shown in Section 8, and any subsequent assembler's code shall be stamped on the re-wheeled/re-tyred axle as follows :-

- i) Roller bearing axles with existing assembly markings positioned on the periphery of the axle end spigot shall be stamped on the axle end face, except for axles with axial end thrust pads, see Section 8.
- ii) Roller bearing axles with existing assembly markings positioned on the axle end face shall, where the information has changed, have the markings over-stamped with the latest required information.
- iii) Plain bearing axles shall, where the information has changed, have their markings on the axle end face over-stamped with the latest required information.
- iv) When a wheelset has been repaired by a different Contractor to the previous Subsequent Assembler the subsequent assembler's code shall be carefully peened out and erased by filing. Stamping shall then be completed.

9.1.3 The date of re-assembly and proving thrust/pressing on tonnage shall be logged on the axle record card.

10. GENERAL NOTES

10.1 The following details apply to wheelset assemblies and components in general :-

10.1.1 The axle geometry code (see Table 3) is only to be added after the serial number of the following axles :-

- i) Axles reclaimed by modifying their geometry.
- ii) Replacement axles where the geometry of the new axle differs from the original design due to the inclusion of transition radii, stress relief grooves.

NOTE : For further details of axle geometry code refer to WOSS 612/10.

10.1.2 Wheel/gearwheel/pulley/axle mounted disc to axle pressing on/proving thrust tonnages shall be recorded in accordance with BS 5892 and the axle record card 'marked up' accordingly.

10.1.3 All new axles shall receive a new serial number. Under no circumstances shall a replacement axle take the serial number of the original.

10.1.4 Where it is anticipated that any subsequent machining of a wheel, wheel centre or tyre, may remove the original branding details provided by the manufacturer then the information shall be recorded and on completion shall be COLD stamped in the location specified.

10.2 All branding on wheels and tyres specified in this document shall remain clearly legible after application of the finished surface coating. This applies to initial assembly and any subsequent overhaul.

10.3 For typical Axle Record Card see appendix 1.

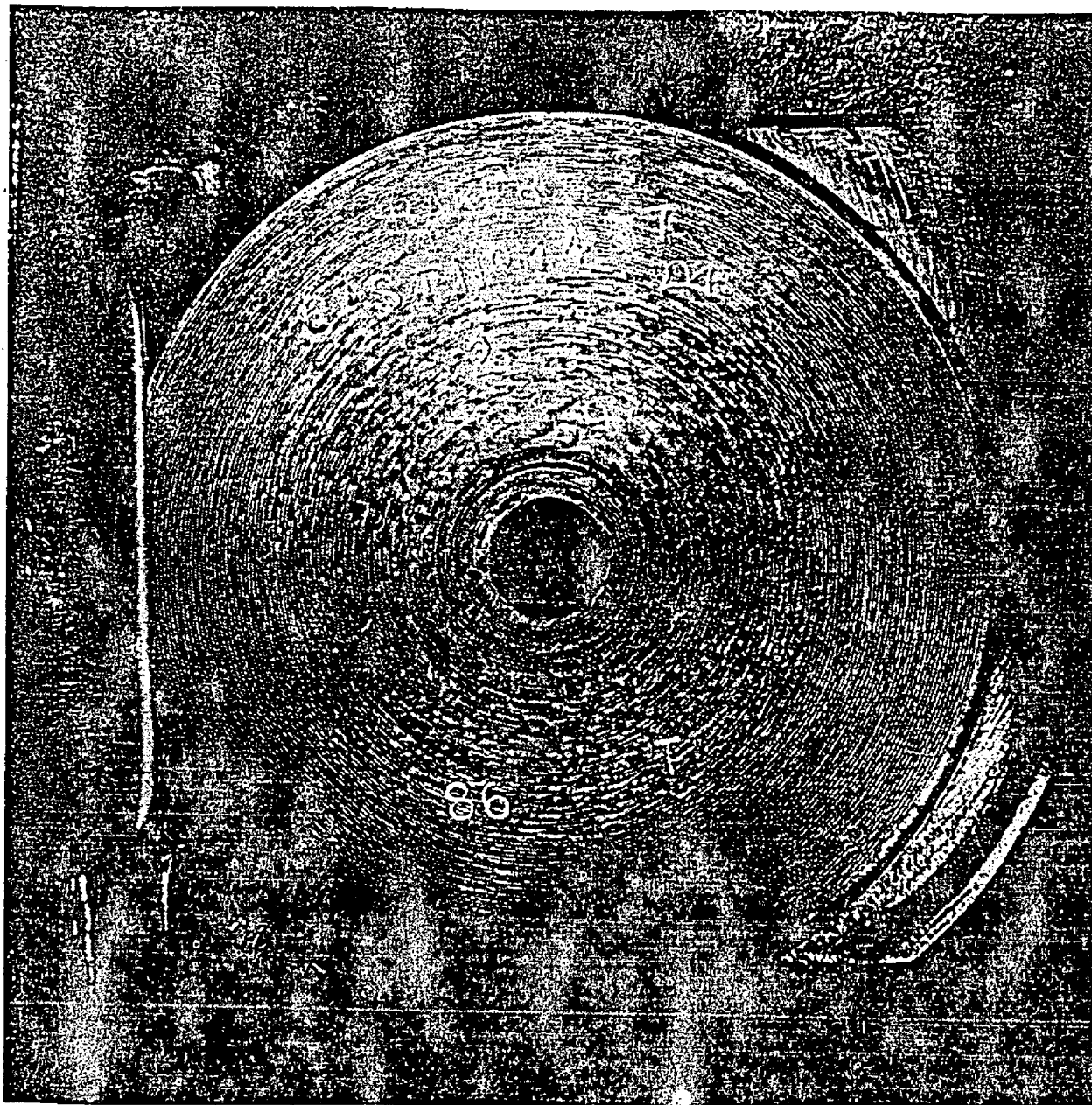


FIG. 10

AXLE END FACE STAMPING REQUIRING ACTION

NOTE

Axle Serial Number to be allocated, see Sub-Section 1.1.5.

TABLE 1.
Code for Identification of Authorised Wheel & Axle Assemblers.

ASHFORD	SA
C.F.A.S. (France - Valdunes)	FY
C.F.A.S. (France - Valenciennes)	UV
B.R.E.L. CREWE	M6
B.R.E.L. DERBY LITCHURCH LANE	M1
DIRECTOR OF CIVIL ENGINEERING (DONELLI) (GEISMAR) (MATISA) (NEI) (PLASSER)	CE (D) CE (G) CE (M) CE (N) CE (P)
R.F.S. ENGINEERING DONCASTER	E6
B.R.M.L. EASTLEIGH	SE
B.R.M.L. GLASGOW	SC
A.B.B. BRITISH WHEELSET Ltd. (Ex RAILWAY & RING ROLLED PRODUCTS Ltd.) (Ex B.S.C.)	TB
B.R.M.L. WOLVERTON	M3
HUNSLET BARCLAY Ltd.	AB

TABLE 2
Code for Identification of Manufacturers Name

A.B.B. BRITISH WHEELSET Ltd (Ex RAILWAY & RING ROLLED PRODUCTS Ltd.) (Ex B.S.C.)	TB
RING ROLLED PRODUCTS Ltd. (Ex B.S.C)	SP
C.F.A.S. (France-Valdunes)	FY
C.F.A.S. (France-Valenciennes)	UV
ITALSIDER S.P.A. (Italy)	I
KRUPP-KLOCKNER (Germany)	SKK
M.A.N. (Germany)	GHH
SURAHAMMARS (Sweden)	S
MAFERSA (Brazil)	MV
COCKERILL FORGES AND RINGMILL (BELGIUM)	CFR

TABLE 3
Reclaimed Axle Geometry Code (see also Sub-Section 10.1.1)

REPROFILED	R
STRESS RELIEVING GROOVES ADDED	G
25mm(1 Inch) STRESS RELIEVING GROOVES ADDED	G1
WIDE STRESS RELIEVING GROOVES ADDED	WG

TABLE 4
Code for Wheel, Wheel Centre & Tyre Materials.

GRADE OF MATERIAL		CODE
B.R. SPEC. 107.		A
B.R. SPEC. 100/108B.		B
B.R. SPEC. 100/108C.		C
B.R. SPEC. 100/108D.		D
B.R. SPEC. 100/108E.		E
B.R. SPEC. 167 (C52TS)		F
B.R. SPEC. 118A		H
B.S. 5892 Pt.4.	Grade B5	5
I.O.S. 1005 Pt.1.		
U.I.C. 810-1		
B.S. 5892 Pt.4.	Grade B6	6
I.O.S. 1005 Pt.1.		
U.I.C. 810-1		
B.S. 5892 Pt.3.	Grade R7	7
I.O.S. 1005 Pt.6.		
U.I.C. 812-3		
B.S. 5892 Pt.3.	Grade R8E	8E
I.O.S. 1005 Pt.6.		
U.I.C. 812-3	Grade R8T	8T
B.S. 5892 Pt.2	Untreated	U
	Normalised	N

BRITISH RAIL		RECORD OF DRIVING/TRAILER AXLE: WHEELSET ASSEMBLY		DRAWING No. SL/DN/T-777	RAVERS CODE JALOYHAX
Original Assembler		Axle Serial Number		Class/Type of Vehicle	

ITEM	AXLE END POSITION					
	SERIAL NUMBER END.			OTHER END		
WHEEL CENTRE/ MONOBLOC WHEEL	Assembler	R6	R6	R6	R6	
	Date Assembled	9/84	3/90	9/84	3/90	
	Maker	TB	TB	TB	TB	
	Cast Number	B106	D805	B106	D809	
	Class of Material	A	U	A	U	
	Year of Manufacture	83	90	83	90	
Pressing on Load*	90T	95T	95T	90T		
TYRES	Assembler	R6	R6	R6	R6	
	Date Assembled	9/84	3/90	9/84	3/90	
	Maker	SP	TB	SP	TB	
	Cast Number	C2910	A3059	C2919	A3059	
	Class of Material	D	S	D	S	
	Year of Manufacture	84	89	84	89	
Gears/Wheel	Pressing on Load*	68T	65T			
	Serial Number	SA4418	SA4418			
	Assembler	H6	H6			
	Date Assembled	9/84	3/90			
Wheel Centre/ Axle Journal/ Brake Disc	Pressing on Load*					
	Serial Number					
	Assembler					
	Date Assembled					

*OR PROVING THRUST LOAD, AS APPLICABLE. (Not applicable to wheel cheek mounted brake discs)

Axle	Maker	Cast Number	Year of Manufacture
	SP	A3240	83

Original Assembler	Axle Serial Number	Class/Type of Vehicle
R6	69324	CLASS 37 LOCO.

†DUPLICATE

NOTES: (PRIOR TO OVERHAUL)
 WHEELSET RECEIVED FOR REPAIR WITH
 SEVERELY LOOSE TYRES, BOTH WHEEL
 CENTRES RENEWED.

In order that the Tyres for Vehicle may be typed (compare the perforation and the right hand side of the wheel which is on below it - as close to the perforation as possible. After typing front and back, both of performed steps.

Commence typing here

In order that the Times be VISIBLE they must be typed between the perforation and the light horizontal line which is 1/4" below it - as close to the perforation as possible. After typing front and back, tear off perforated strip.

↓
Continued
typing here

DETAILS		AXLE END POSITION					
		SERIAL NUMBER END			OTHER END		
WHEEL CENTRE/ MONITOR WHEEL	OUTSIDE DIAMETER	37.000	37.000	37.001	37.000		
	BORE	7.751	7.750	7.750	7.750		
TYRE BORE		36.949	36.947	36.950	36.948		
WHEEL CENTRE TO TYRE INTERFERENCE		0.051	0.053	0.051	0.052		
AXLE WHEELSEAT DIAMETER		7.760	7.760	7.759	7.759		
WHEEL CENTRE/MONITOR WHEEL TO AXLE INTERFERENCE		0.009	0.010	0.009	0.009		
AXLE JOURNAL DIAMETER		6.504	6.504	6.5045	6.5045		

NON DESTRUCTIVE TESTING RECORDS	
DATE OF TEST	9/84
RESULT OF INITIAL TEST	CLEAR
DETAILS OF RECLAMATION	-
RESULT OF FINAL TEST	-
DATE OF FINAL TEST	3/90
PAGE NUMBER OF NDT REGISTER AND/OR NDT FORM REFERENCE NO.	PAGE 17 OF NO. A20 REGISTER
	PAGE 23 OF NO. C15 REGISTER

REMARKS: 3/90 - CRACK DEPTH 0.010" x 5" LONG, 16" FROM AXLE END (NGE)
 ? - CRACK DEPTH 0.020" x 8" LONG, 16.25" FROM AXLE END (GE)

Appendix 2

Sheet 1 of 2

OBSOLETE MANUFACTURING/ASSEMBLING CONTRACTOR	CODE
ASHFORD	A
BAKER & BESSEMER	B
BIRMINGHAM CARRIAGE & WAGON	BC
BEARDSMORE	BM
BEYER PEACOCK	BP
SCOTTISH REGION	* C
DARLINGTON FORGE ?	DF
EASTERN REGION	* E
STRATFORD	E1
SHILDON	E2
YORK	E3
DARLINGTON	E4
GORTON	E5
GLASGOW RAILWAY ENGINEERING Co	G
GLOUCESTER	G1
HUDSWELL	H
HURST NELSON	H2
HUNSLET	HE
MIDLAND REGION	* M
HORWICH	M2
EARLESTOWN	M4
SWINDON	W1

* Note: These were not Contractors as such but controlled the register of wheelsets for locomotives

OBSOLETE CODES FOR MANUFACTURING/ASSEMBLING CONTRACTORS

Appendix 2

Sheet 2 of 2

OBSOLETE MANUFACTURING/ASSEMBLING CONTRACTOR	CODE
BOW	M5
DERBY LOCOMOTIVE WORKS	M7
RUSTON	MR
NORTH EASTERN REGION	* N
NORTH BRITISH	NB
OWEN	O
ROY PICKERING	P
CHARLES ROBERTS	R
ROBERT STEPHENSON	RS
SOUTHERN REGION	* S
BRIGHTON	SB or B
LANCING	SL or L
TAYLOR BROS	T1
VULCAN FOUNDRY	VF
WESTERN REGION	* W
WOLVERTON	W2
CAERPHILLY	W3
W BAGNALL	WB
YORKSHIRE ENGINE Co	YE

* Note: These were not Contractors as such but controlled the register of wheelsets for locomotives

OBSOLETE CODES FOR MANUFACTURING/ASSEMBLING CONTRACTORS