

MT 106

British Railways Board

Director of Mechanical and Electrical Engineering

IDENTIFICATION OF FLEXIBLE HOSES



PREFACE

1. This publication replaces Issue 2 of MT/106 dated August 1981.
2. This booklet has been provided to assist in the identification of all Flexible Hose assemblies for use on Traction and Rolling Stock.
3. This publication is applicable to hose assemblies required to be fitted on the various systems of Locomotives, Coaches and Freight Stock. If a suitable hose is not found the Design Support-General should be informed and the necessary action will be taken.
4. It is essential that future hose requirement be ordered as specified on these drawings in conjunction with the respective purchasing contracts.
5. Additional/amended pages will be issued as and when it becomes necessary.
6. See individual hose diagram booklets for hose application/position information on Locomotives, Engineering Instruction G/462 lists the Locomotive classes for which hose diagram booklets are available.
7. See Appendix A for list of approved suppliers.

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2312/3537n/3

C O N T E N T S

SECTION

- 1) Swaged End Fitted Hose Assemblies.
- 2) Standard Reusable End Fitted Hose Assemblies.
- 3) Buffer Beam Hose Assemblies (available later).
- 4) Metallic Hose Assemblies.
- 5) Miscellaneous Hose Assemblies.

SECTION 1

SWAGED END FITTED HOSE ASSEMBLIES

SIZES			TYPE OF END FITTINGS											LITERATURE	ALTERATION	CHECKS	DATE
BSP	O/D NO.	HOSE BORE	STRAIGHT FEMALE	STRAIGHT FEMALE	STRAIGHT FEMALE	STRAIGHT FEMALE	STRAIGHT FEMALE	STRAIGHT FEMALE L.P.	90° FEMALE	90° FEMALE	90° FEMALE	90° FEMALE L.P.	90° FEMALE H.P.				
		m m	STRAIGHT FEMALE	PARALLEL MALE	90° FEMALE	90° FEMALE BUCKLEBOW	135° FEMALE	STRAIGHT SAE FLANGE	PARALLEL MALE	90° FEMALE	135° FEMALE	SAE FLANGE	SAE FLANGE				
1/4		6.4	M-A3-9002926	M-A3-9002927	9002928 9028902	M-A3-9002929	M-A3-9002930		M-A3-9002931	M-A3-9002932	M-A3-9002933			A	DRGM-A3-9009476 ADDED.	1/18	7/9
3/8		9.5	9002935 9019737		9002936 9009476		M-A3-9002937			M-A3-9002938	M-A3-9002939			B	DRGM-A3-9013066 ADDED.	1/18	7/9
3/8	3/8	9.5												C	DRGM-A3-9019737 ADDED.	1/18	7/9
	1/2	9.5												D	DRGM-A3-9028902 ADDED.	1/18	7/9
1/2	1/2	9.5												E	DRGM-A3-9029040 ADDED.	1/18	7/9
1/2		12.7	9002945 9013066		9002946 9029040		M-A3-9002947		M-A3-9002948	M-A3-9002949	M-A3-9002950			F	M-A3-9002951 & M-A3-9002957 DELETED.	1/18	7/9
	5/8	12.7															
5/8		15.9	M-A3-9002955		M-A3-9002956					M-A3-9002958							
	3/4	15.9															
	7/32	15.9															

FORMERLY BR DRG.No.
L-A3-5695(PART)

INDEX
TO TYPE HOSE
ASSEMBLIES WITH
SWAGED END FITTINGS

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	—	A	B	C	D	E
Drawing No	M-A3-9002920	F				
Drawn	Traced	Checked	Date			
P.S.G.	—	X	J			1/81

SIZES			TYPE OF END FITTINGS											ISSUE LETTER	ALTERATION	DRAWN INITIALS	DATE
BSP	O/D INCH	HOSE BORE mm	135° FEMALE	135° FEMALE	135° FEMALE H.P. 90°	135° FEMALE L.P. 135°	L.P. STRAIGHT SAE FLANGE	L.P. STRAIGHT SAE FLANGE	L.P. STRAIGHT SAE FLANGE	H.P. STRAIGHT SAE FLANGE	H.P. STRAIGHT SAE FLANGE	H.P. STRAIGHT SAE FLANGE	L.P. 90° SAE FLANGE	A	FIRST ISSUE		
			PARALLEL MALE	135° FEMALE	SAE FLANGE	SAE FLANGE	SAE FLANGE	SAE FLANGE	SAE FLANGE	SAE FLANGE	SAE FLANGE	SAE FLANGE	SAE FLANGE				
1/4		64		M-A3-9002934													
3/8		95		M-A3-9002940													
3/8	3/8	95															
	1/2	95															
1/2	1/2	95															
1/2		127		M-A3-9002952		M-A3-9002953											
	5/8	127															
5/8		159		M-A3-9002959													
	3/4	159															
	7/8	159															

FORMERLY BR DRG.No. L-A3-5695(PART)

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 TO P'TYPE HOSE ASSEMBLIES WITH SWAGED END FITTINGS

CHIEF MECHANICAL & ELECTRICAL ENGINEER
 BRITISH RAILWAYS BOARD
 STANDARDS & RATIONALIZATION
 DERBY

Scale	—	A			
Drawing No	M-A3-9002921				
Drawn	Traced	Checked	Date		
PSG.	—				1/81

SIZES			TYPE OF END FITTINGS										ISSUE LETTER	ALTERATION	DRAWN INITIALS	DATE
BSP	O/D INCH	HOSE BORE mm	L.P. 90° SAE FLANGE	H.P. 90° SAE FLANGE	H.P. 90° SAE FLANGE	H.D. STRAIGHT STAND PIPE	H.D. STRAIGHT STAND PIPE	H.D. STRAIGHT STAND PIPE	H.D. STRAIGHT STAND PIPE	TAPER MALE	STRAIGHT FEMALE					
			L.P. 135° SAE FLANGE	H.P. 90° SAE FLANGE	H.P. 135° SAE FLANGE	H.D. STRAIGHT STAND PIPE	H.D. STRAIGHT FEMALE	H.D. PARALLEL MALE	H.D. 90° FLANGE	TAPER MALE	TAPER MALE					
1/4		64														
3/8		95								M-A3-9002941	M-A3-9028982					
3/8	3/8	95					M-A3-9002942									
	1/2	95				M-A3-9002943										
1/2	1/2	95						M-A3-9002944								
1/2		127									M-A3-9028981					
	5/8	127				M-A3-9002954										
5/8		159														
	3/4	159				M-A3-9002960										
	7/32	159				M-A3-9002961										

FORMERLY BR DRG.No. L-A3-5695(PART)

INDEX
 TO TYPE HOSE ASSEMBLIES WITH SWAGED END FITTINGS

CHIEF MECHANICAL & ELECTRICAL ENGINEER
 BRITISH RAILWAYS BOARD
 STANDARDS & RATIONALIZATION
 DERBY

Scale: _____ A B

Drawing No: M-A3-9002922

Drawn: _____ Traced: _____ Checked: _____ Date: 1/81

ISSUE LETTER: A B

ALTERATION: FIRST ISSUE; M-A3-9028981 & M-A3-9028982 ADDED

DRAWN INITIALS: [Signature]

DATE: 1/81

SIZES		TYPE OF END FITTINGS												ISSUE LETTER	ALTERATION	D.M.A.'S INITIALS	DATE					
BSP	O/D INCH	HOSE BORE mm	STRAIGHT FEMALE	STRAIGHT FEMALE	STRAIGHT FEMALE	STRAIGHT FEMALE	STRAIGHT FEMALE	STRAIGHT FEMALE	STRAIGHT FEMALE L.P.	90° FEMALE	90° FEMALE	90° FEMALE	90° FEMALE L.P.					90° FEMALE H.P.	A	B	C	
3/4"		19.0	9002962 9022958	M-A3- 9002963	9002964 9025674				M-A3- 9002965	M-A3- 9002966			M-A3- 9002967	M-A3- 9002968					FIRST ISSUE			
	7/8"	19.0																				
3/4"	7/8"	19.0																				
1"		25.4	M-A3- 9002973		M-A3- 9002974				M-A3- 9002975				M-A3- 9002976	M-A3- 9002977								
	1"	25.4																				
		25.4																				
	1 1/4"	25.4																				
	1 1/2"	25.4																				
1 1/4"		31.8	9002993 9022959		M-A3- 9002994			M-A3- 9002995					M-A3- 9002996	M-A3- 9002997	M-A3- 9002998							
		31.8																				
	1 1/2"	31.8																				
	1 1/2"	31.8																				
	1 1/2"	38.1	M-A3- 9003015		M-A3- 9003016								M-A3- 9003017	M-A3- 9003018								
		38.1																				
	2"	50.8	M-A3- 9003032											M-A3- 9003033								
		50.8																				

FORMERLY BR DRG.No.
L-A3-5695(PART)

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TO TYPE HOSE
ASSEMBLIES WITH
SWAGED END FITTINGS

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Scale		A	B	C
Drawing No	M-A3-9002923			
Drawn Traced Checked Date	PS.G. ---	R	1/84	1/81

SIZES		TYPE OF END FITTINGS												ISSUE LETTER	ALTERATION	DRAWN'S INITIALS	DATE
BSP	O/D INCH	HOSE BORE mm	135° FEMALE	135° FEMALE	135° FEMALE H.P. 90°	135° FEMALE L.P. 135°	L.P. STRAIGHT SAE FLANGE	L.P. STRAIGHT SAE FLANGE	L.P. STRAIGHT SAE FLANGE	H.P. STRAIGHT SAE FLANGE	H.P. STRAIGHT SAE FLANGE	H.P. STRAIGHT SAE FLANGE	L.P. 90° SAE FLANGE	A	B		
			PARALLEL MALE	135° FEMALE	SAE FLANGE	SAE FLANGE	SAE FLANGE	SAE FLANGE	SAE FLANGE	SAE FLANGE	SAE FLANGE	SAE FLANGE	SAE FLANGE				
3/4"		190		M-A3-9002969													
	7/8"	190															
3/4"	7/8"	190															
1"		254															
	1"	254															
		254															
	1 1/8"	254															
	1 1/4"	254															
1 1/4"		318	M-A3-9002999	M-A3-9003000	M-A3-9003001												
		318				M-A3-9003002	M-A3-9003003			M-A3-9003005			M-A3-9003008				
	1 1/2"	318															
	1 1/2"	318															
1 1/2"		381															
		381															
	1 3/4"	381						M-A3-9003022									
2"		508															
		508					M-A3-9003035	M-A3-9003036		M-A3-9003038	M-A3-9003039						

FORMERLY BR DRG.No.
L-A3-5695(PART)

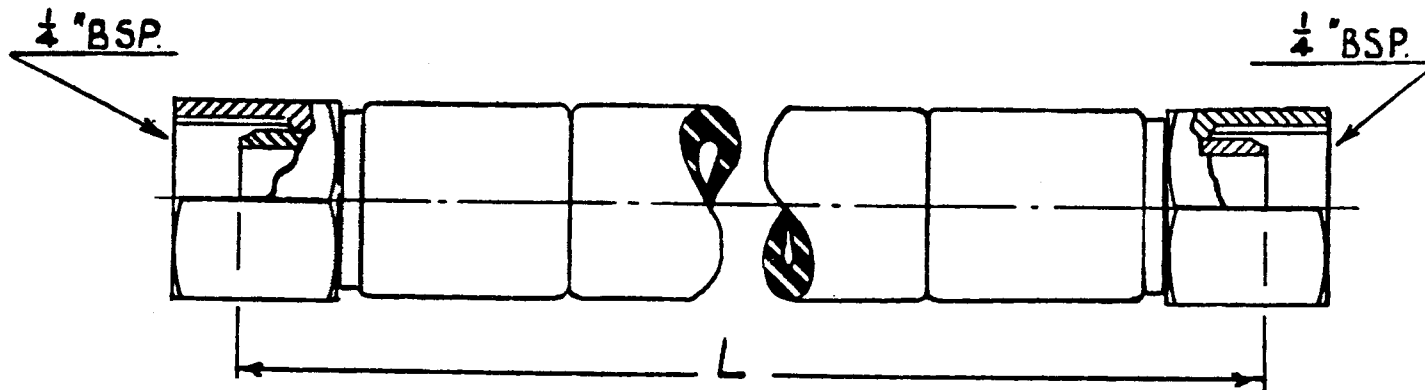
INDEX
TO P'TYPE HOSE
ASSEMBLIES WITH
SWAGED ENDFITTINGS

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ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale _____ A B

Drawing No
M-A3-9002924

Drawn Traced Checked Date
P.S.G. _____ 1/81



STRAIGHT FEMALE - STRAIGHT FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	INITIALS	DATE
A	ITEM 9 ADDED	J.S.G.	2/78
B	ITEM 4 DELETED ITEM 7 & 8 WAS 47/6 NOW 47/9.	J.S.G.	4/80
C	ITEM 5 CLASSES 44, 45 & 46 ADDED.	J.S.G.	11/80
D	NEW DRG No ADDED	S.B.	1/81
E	ITEM 10 & 11 ADDED	J.S.G.	1/82
F	ITEM 12 ADDED	J.S.G.	7/82
G	ITEM 01 & 06 DEL CLASS 55. - 03 DEL. - 05 - CLASS 44 DEL. - 08 CLASS 141 ADDED.	J.S.G.	11/82
H	ITEM 13 & 14 ADDED - 01 CLASS 141 ADDED.	M.P.	1/85
J	ITEM 15 ADDED	J.S.G.	1/85
K	ITEM 16 ADDED	J.S.G.	1/85
L	ITEMS 01 & 06 CLASS 142 ADDED	J.S.G.	1/85
M	ITEM 14 LENGTH WAS 260	J.S.G.	2/85

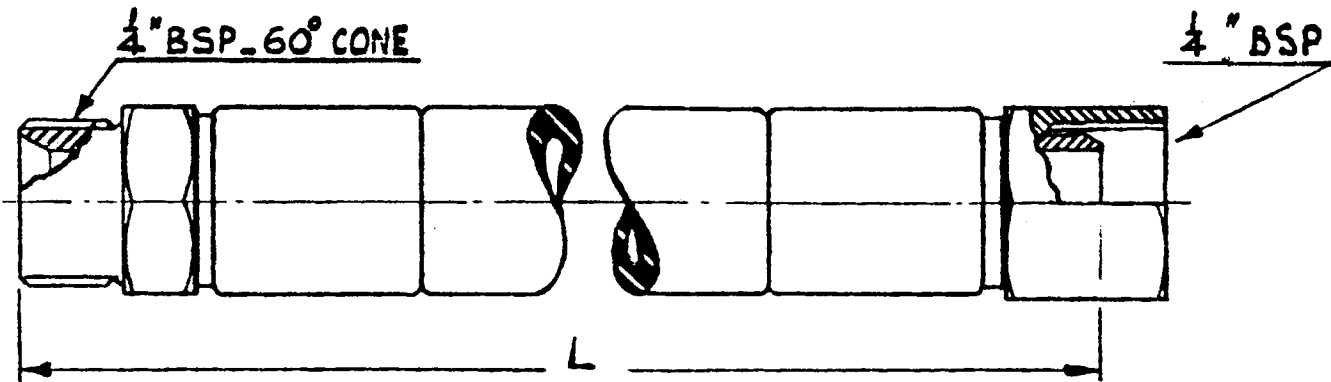
ITEM No	LENGTH L.m.m.	HOSE DATA				BR. CAT. NUMBER	VEHICLE CLASS
		SPECIFICATION SAE	BSS	WORKING PRESSURE	TEMPERATURE °C			REINFORCED BY
01	420	100R1-A	3832-B1	190	-40 to +93	1 WIRE BRAID	
02	460	"	"	"	"	"	
03							
04							
05	725	"	"	"	"	"	
06	1345	"	"	"	"	"	
07	535	"	"	"	"	"	
08	660	"	"	"	"	"	
09	400	"	"	"	"	"	
10	355	100R2-A	3832-B2	345	"	2 WIRE BRAID	
11	635	"	"	"	"	"	
12	1000	100R1-A	3832-B1	190	"	1 WIRE BRAID	
13	575	"	"	"	"	"	
14	325	"	"	"	"	"	
15	800	"	"	"	"	"	
16	260	"	"	"	"	"	
17							
18							

FORMERLY BR DRG No
L-A3-5610

TYPE P
RUBBER HOSE
6.4 m.m. BORE

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STANDARDS & RATIONALIZATION
DERBY

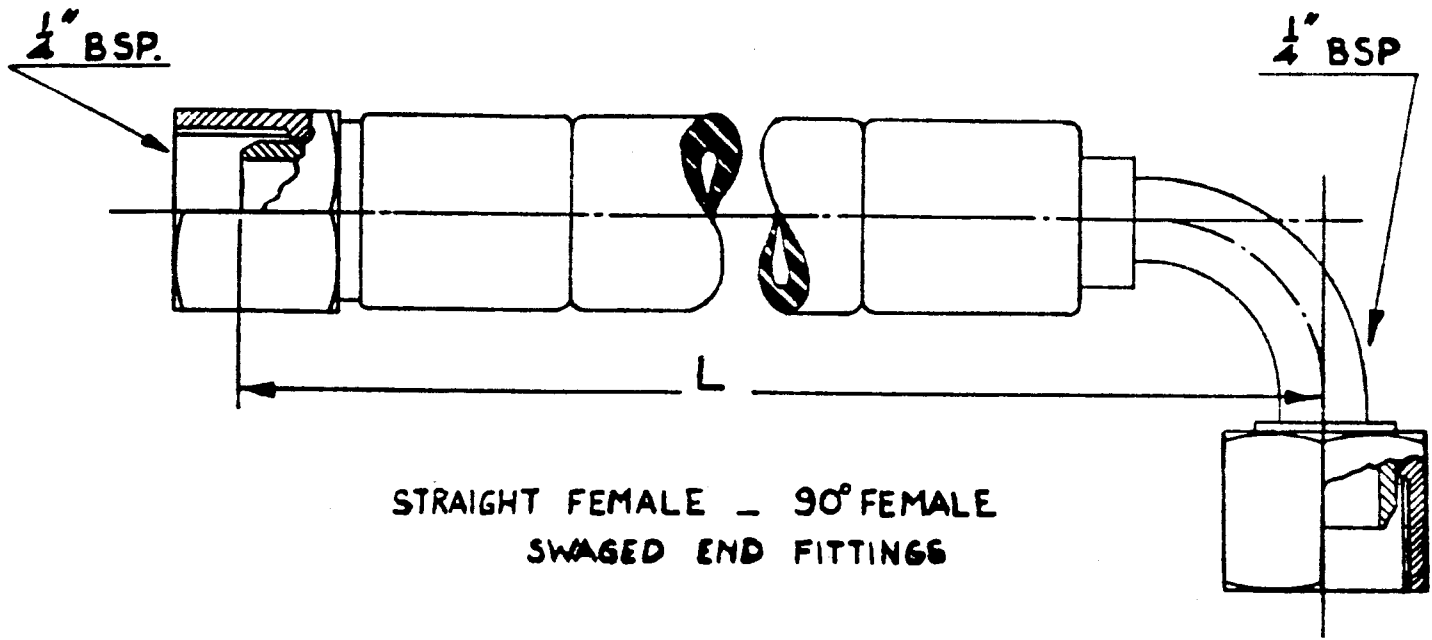
Scale	—	A	B	C	D	E
Drawing No	M-A3-9002926	F	G	H	J	K
Drawn	JRS	L	M			
Traced	—					
Checked	—					
Date	18/1/85					



PARALLEL MALE - STRAIGHT FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DRAWN'S INITIALS	DATE
A	ITEM 3 ADDED		9/75
B	ITEM 3 WAS 800 LONG		9/75
C	ITEM 3 WAS 315 LONG		11/75
D	NEW DRG No ADDED		5/81
E	ITEM 02 DELETED		11/75

ITEM No	LENGTH L_m.m.	HOSE DATA					BR. CAT. NUMBER	VEHICLE/ CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY		
		SAE	BSS					
01								FORMERLY BR DRG. No L-A3-5597
02								
03	460	100R1-A	3832-B1	190	-40 to +93	1 WIRE BRAID	51/51007	31
04								TYPE P RUBBER HOSE 6.4 m.m. BORE
05								
06								
07								
08								
09								CHIEF MECHANICAL & ELECTRICAL ENGINEER BRITISH RAILWAYS BOARD STANDARDS-RATIONALIZATION DERBY
10								
11								
12								
13								
14								
15								
16								
17								Scale
18								Drawing No M-A3-9002927
								Drawn/Traced/Checked/Date JRS - - - JAN 75



STRAIGHT FEMALE - 90° FEMALE
SWAGED END FITTINGS

REV. LETTER	ALTERATION	D.M.A.'S INITIALS	DATE
A	ITEM 8 ADDED	JRS	1/76
B	ITEM 9 ADDED. DEMU ADDED TO ITEM 4.	JRS	6/76
C	ITEM 8 DELETED	JRS	6/76
D	ITEM 2 DELETED FOR REPLACEMENT SEE 1/L-A3-9147	JRS	9/76
E	ITEM 10 ADDED	JRS	10/76
F	ITEM 4, DEMU DELETED. ITEM 5, CLASS 47/9 ADDED ITEM 9 DELETED	P S G	7/80
G	NEW DRG No ADDED ITEM 11 ADDED.	SB	1/81
H	ITEMS 12 & 13 ADDED	JRS	7/76
J	ITEM 13 WAS 750 LONG. - 14 ADDED	JRS	7/76
K	ITEM 14 CAT.No WAS 72/9506	JRS	7/76
L	ITEM 11 DEL.	JRS	7/76
M	CLASS 55 DELETED FROM ITEM 03, ITEM 04 DELETED.	JRS	7/76
N	ITEM 15 & 16 ADDED " 01 03 & 10 CLASS 150 ADDED	JRS	8/76
P	ITEM 17 ADDED	JRS	1/81
Q	ITEM 04 REINSTATED	JRS	1/81
R	ITEM 18 ADDED	JRS	1/81

ITEM No.	LENGTH L.m.m.	HOSE SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY	BR. CAT. NUMBER	VEHICLE / CLASS
		S.A.E.	B.S.G.					
01	245	100R1-A	3832-B1	190	-40 to +93	1 WIRE BRAID	61/41034	47,150
02								
03	420	"	"	"	"	"	51/16011	25,150
04	485	"	"	"	"	"	51/16046	150
05	1120	"	"	"	"	"	61/41037	27,47/9
06	1250	"	"	"	"	"	51/16047	40
07	1225	"	"	"	"	"	51/16048	40
08								
09								
10	580	"	"	"	"	"	61/41364	26,27,150
11								
12	600	-	-	-	-	-	51/16278	20,
13	760	-	-	-	-	-	51/16279	20,
14	820	-	-	-	-	-	72/5533	253,254,
15	980	-	-	-	-	-	15/78073	150
16	170	-	-	-	-	-	15/78074	150
17	300	-	-	-	-	-	15/78146	150
18	330	-	-	-	-	-	51/16471	37,

FORMERLY BR DRG No
L-A3-5619

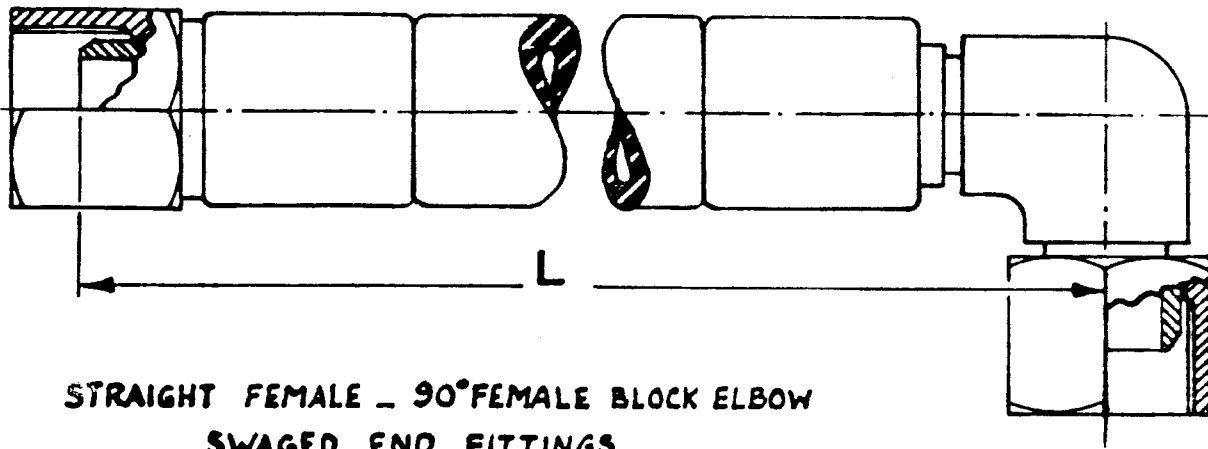
**TYPE P
RUBBER HOSE
6.4 m.m. BORE**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY**

Scale — R B C D E
F G H J K
Drawing No M-A3-9002928 L M N P Q
Drawn/Traced/Checked/Date
JRS — — — JAN 75

1/4" BSP

1/4" BSP



STRAIGHT FEMALE - 90° FEMALE BLOCK ELBOW
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DRAWN'S INITIALS	DATE
A	NEW DRG No ADDED. ITEM 01 CLASS 24 DEL.	M-L	

ITEM No.	LENGTH L - m.m.	HOSE SPECIFICATION		DATA			B.R. CAT. NUMBER	VEHICLE / CLASS
		S.A.E.	B.S.S.	WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY		
01	260	100R1-A	3832-B1	190	-40 to +93	1 WIRE BRAID	61/41035	25-27,33,45-47,
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								

FORMERLY BR DRG No
L-A3-9147

**TYPE P
RUBBER HOSE
6.4 m.m. BORE**

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DERBY

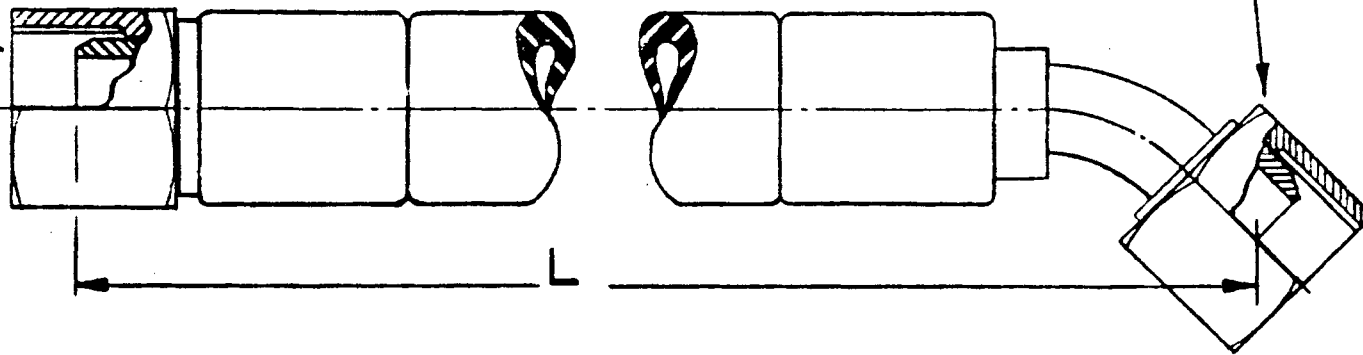
Scale **A**

Drawing No
M-A3-9002929

Drawn	Traced	Checked	Date
J.R.S.	—	—	9/76

1/4" BSP.

1/2" BSP.



STRAIGHT FEMALE - 135° FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DATE
A	ITEMS 8 & 9 ADDED.	1/75
B	ITEM 10 ADDED.	1/76
C	ITEMS 3 & 5 CLASS 254 ADDED - 8, 9 & 10 DEL. - 1 CLASS 31 ADDED	1/80
D	NEW DRG No ADDED. ITEMS 11 & 12 ADDED.	1/81
E	ITEMS 11 & 12 DEL.	1/81
F	ITEM 02 DEL. CLASS 44 DEL. FROM ITEM 01	1/81
G	ITEM 13 ADDED.	1/81
H	ITEM 14 ADDED	1/81

ITEM No.	LENGTH L.m.m.	HOSE DATA					BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY		
		S.A.E.	B.S.S.					
01	280	100R1-A	3832-B1	190	-40 to +93	1 WIRE BRAID	61/41062 31/4546.	
02								
03	865	-	-	-	-	-	72/1820 253254	
04	1145	-	-	-	-	-	61/41063 27.	
05	650	-	-	-	-	-	72/1832 253254.	
06	900	-	-	-	-	-	51/16049 40.	
07	850	-	-	-	-	-	51/16050 40.	
08								
09								
10								
11								
12								
13	450	100R1-A	3832-B1	190	-40 to +93	1 WIRE BRAID	51/16470 37.	
14	550	"	"	"	" " "	" " "	51/16647 37.	
15								
16								
17								
18								

FORMERLY BR DRG.No.
L-A3-5627

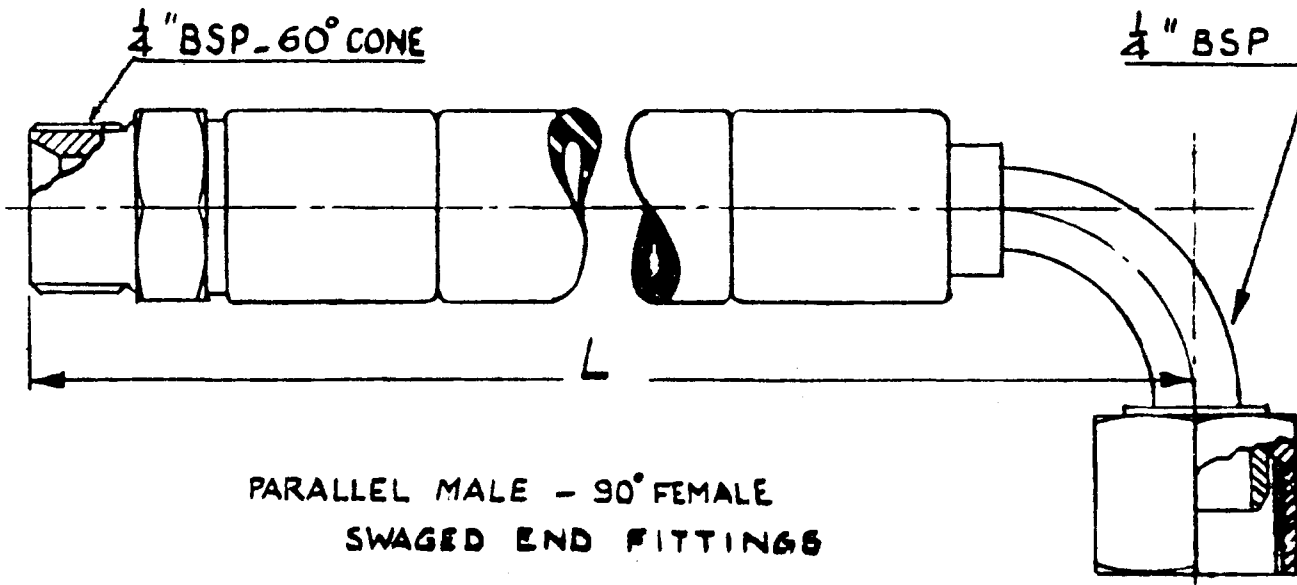
TYPE P
RUBBER HOSE
6.4 m.m. BORE

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER**
BRITISH RAILWAYS BOARD
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DERBY

Scale — A B C D E
F G H

Drawing No
M-A3-9002930

Drawn / Traced / Checked / Date



PARALLEL MALE - 90° FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DRAWN INITIALS	DATE
A	NEW DRG No ADDED	SR	1/81
B	ITEM 01 DEL.	MFD	

ITEM No	LENGTH L-mm	HOSE DATA				BR. CAT. NUMBER	VEHICLE/ CLASS
		SPECIFICATION		WORKING PRESS. BAR.	TEMPERATURE °C			REINFORCED BY
		SAE	BSS				
01							
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							

FORMERLY BR DRG No
L-A3-5600

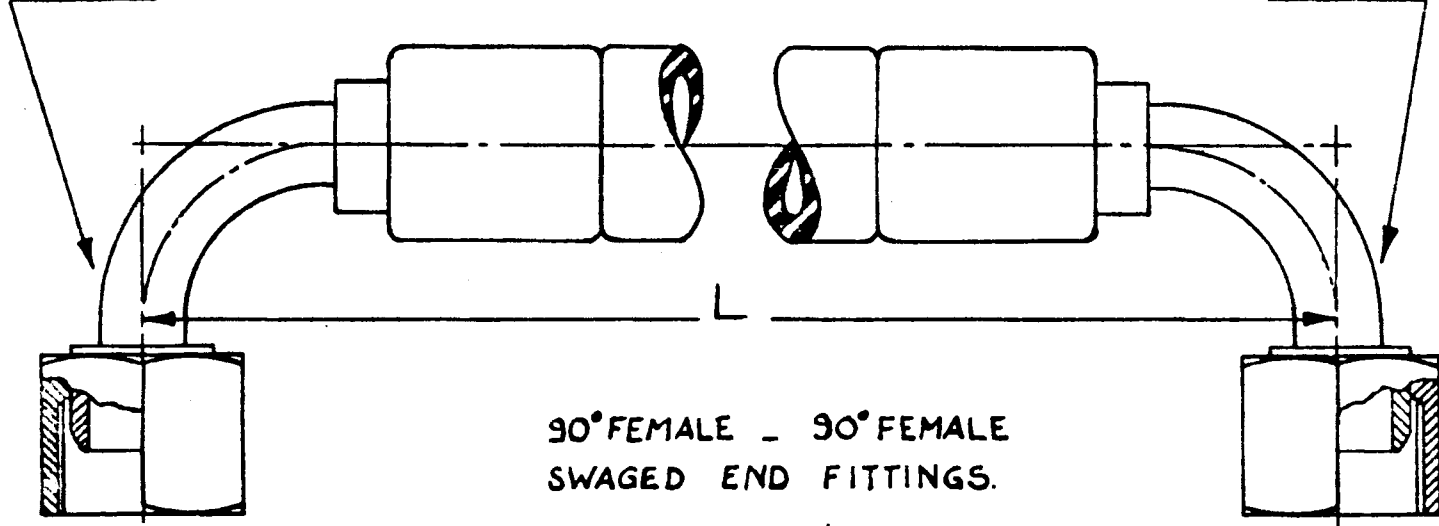
TYPE P
RUBBER HOSE
6.4 m.m. BORE

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DERBY

Scale	—	A	B		
Drawing No	M-A3-9002931				
Drawn/Traced	JRS	Checked	—	Date	JAN 75

1/4" BSP

1/4" BSP



90° FEMALE - 90° FEMALE
SWAGED END FITTINGS.

ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH THE COUPLING FURTHEST FROM THE EYE AT ZERO

ISSUE LETTER	ALTERATION	MAN'S INITIALS	DATE
A	ITEM 7 ADDED	J.R.C.	12/78
B	ITEM 8 ADDED	J.R.C.	1/79
C	ITEM 9 + 10 ADDED	J.R.C.	6/79
D	ITEM 8 DELETED	J.R.C.	6/79
E	ITEMS 3, 7, 9 + 10 DEL.	J.R.C.	7/80
F	NEW DRG No ADDED	S.B.	1/81
G	ITEMS 01, 02, 04 - 06 DEL. 11 ADDED.	J.R.C.	11/81

ITEM No.	LENGTH L.m.m.	HOSE DATA				ANGULAR RELATION	BR. CAT. NUMBER	VEHICLE/ CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C				REINFORCED BY
		A.E.	B.S.S.					
01								
02								
03								
04								
05								
06								
07								
08								
09								
10								
11	545	100R1-A	3832-B1	190	-40 to +93	WIREBRAID	235°	61/42039/27.
12								
13								
14								
15								
16								
17								
18								

FORMERLY BR DRG No L-A3-5635

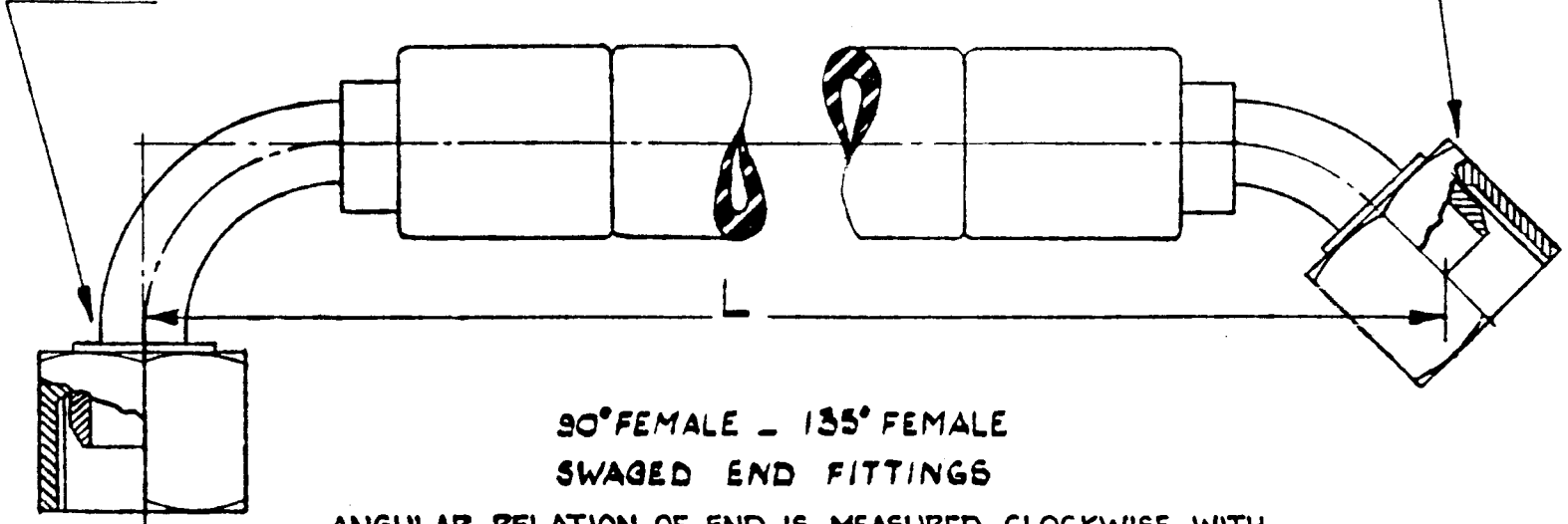
TYPE P
RUBBER HOSE
6.4 m.m. BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DEPBY

Scale	A	B	C	D	E
Drawing No	F	G			
M-A3-9002932					
Drawn	Traced	Checked	Date		

1/4" BSP

1/4" BSP



90° FEMALE - 135° FEMALE
SWAGED END FITTINGS

ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH THE COUPLING FURTHEST FROM THE EYE AT ZERO

ALTERATION	INITIALS	DATE
A ITEM 4 ADDED	P.S.	1/75
B ITEM 5 ADDED	P.S.	1/76
C ITEM 6 ADDED	P.S.	3/76
D ITEM 5 + 6 DELETED	P.S.	4/76
E ITEM 4 DELETED	P.S.	1/80
F NEW DRG No ADDED ITEM 07 ADDED.	S.B.	1/81
G ITEM 07 DEL.	P.C.	1/81
H ITEM 01 & 02 DEL. 08 ADDED.	M.F.D.	1/81
J ITEM 09 & 10 ADDED	R.	1/81
K ITEMS 11 & 12 ADDED	E.T.	1/85

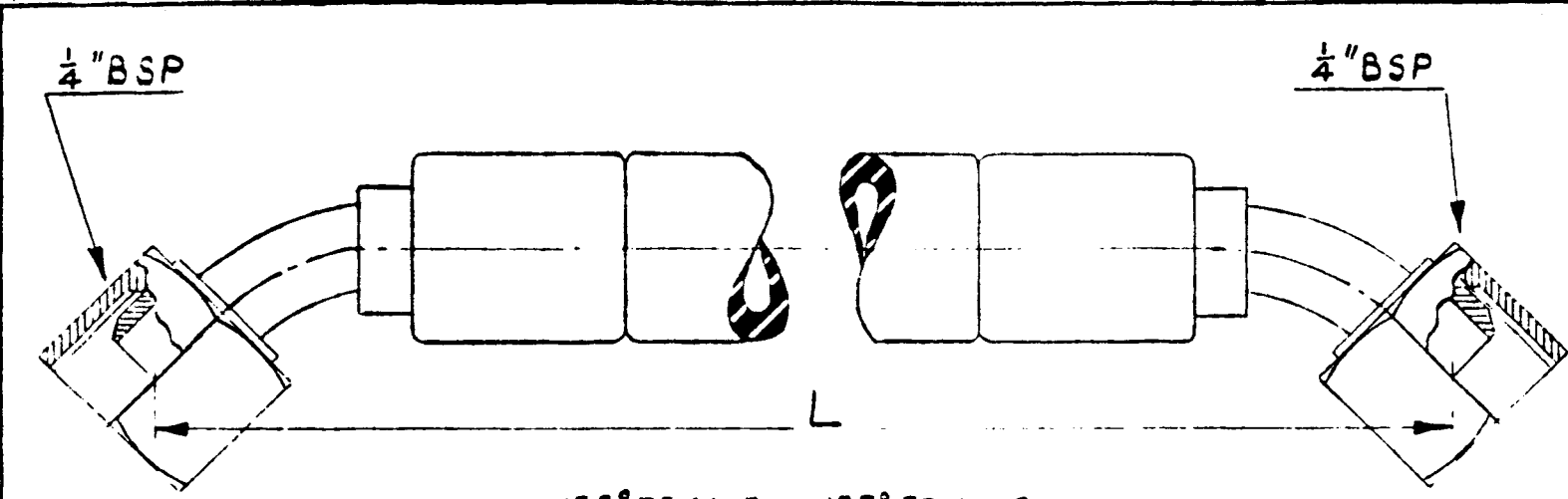
ITEM No.	LENGTH L.m.m.	HOSE DATA					ANGULAR RELATION	BR. CAT. NUMBER	VEHICLE / CLASS
		SPCIFICATION S.A.E.	B.S.S.	WORKING PRESS.BAR	TEMPERATURE °C	REINFORCED BY			
01									
02									
03	1170	100R1-A	3832-B1	190	-40 TO +93	WIREBRAID	180°	61/41091 27.	
04									
05									
06									
07									
08	800	100R1-A	3832-B1	190	-40 TO +93	WIREBRAID	0°	71/4467 253.254.	
09	580	"	"	"	"	"	270°	63/8556 BT 10	
10	870	"	"	"	"	"	0°	63/8557 BT 10	
11	955	"	"	"	"	"	0°	INT DEM. COACH	
12	580	"	"	"	"	"	90°	63/8647 BT 10	
13									
14									
15									
16									
17									
18									

FORMERLY BR DRG No L-A3-5648

TYPE P
RUBBER HOSE
6.4 m.m. BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale	A	B	C	D	E
Drawing No M-A3-9002933	F	G	H	J	K
Drawn / Traced / Checked					Date



135° FEMALE - 135° FEMALE
SWAGED END FITTINGS

ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH
THE COUPLING FURTHEST FROM THE EYE AT ZERO

ITEM No.	LENGTH L.m.m.	HOSE DATA				ANGULAR RELATION	BR. CAT. NUMBER	LOCOMOTIVE CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C				REINFORCED BY
		S.A.E.	B.S.S.					
01								
02								
03								
04	600	100R1-A	3832-B1	190	-40 to +93	1 WIRE BRAID	15/81787	141
05	650	-	-	-	-	-	51/16472	37.
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								

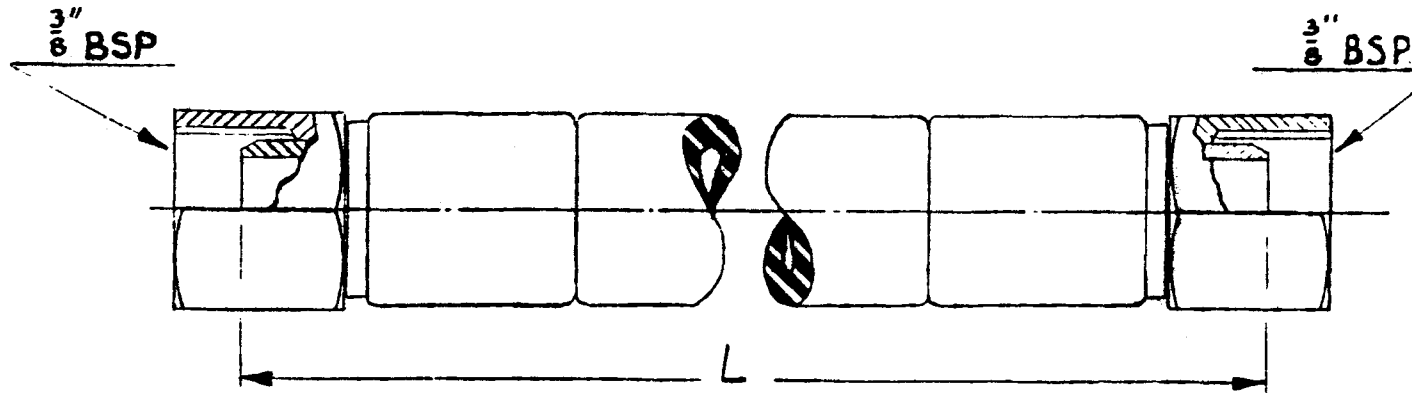
ISSUE LETTER	ALTERATION	D.M.A.N.'S INITIALS	DATE
A	ITEM 2 & 3 ADDED		12/20
B	ITEM 2 & 3 DELETED		1/20
C	NEW DRG No ADDED		58/161
D	ITEM 01 DELETED		
E	ITEM 04 ADDED		1/21
F	ITEM 05 ADDED		7/21

FORMERLY BR DRG No
L-A3-5644

TYPE P
RUBBER HOSE
6.4 m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	—	A	B	C	D	E
Drawing No	M-A3-9002934	F				
Drawn	Traced	Checked	Date			



STRAIGHT FEMALE - STRAIGHT FEMALE
SWAGED END FITTINGS

ISSUE	ALTERATION	INITIALS	DATE
N	ITEM 14 DELETED	W/S	8/65

ITEM No.	LENGTH L.m.m.	HOSE DATA					BR. CAT. NUMBER	LOCOMOTIVE CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY		
		S A E	B S S					
01	310	100R1-A	3832-B1	155	-40 TO +93	WIRE BRAID	EXP DL/694	17/60100/56.
02	420	-	-	-	-	-	-	77/1300/03,47/9,14,142
03	500	-	-	-	-	-	-	72/1800/47/9,56.
04	960	-	-	-	-	-	-	70/14530/56,142
05	350	-	-	-	-	-	-	70/21276/56.
06	655	-	-	-	-	-	-	61/41016/47,58.
07	720	-	-	-	-	-	-	61/41017/45,46,150,141
08								
09	1255	-	-	-	-	-	EXP DL/695	72/1802/56
10								
11								
12								
13	750	-	-	-	-	-	-	61/41513/47/9,20.
14								
15								
16	380	-	-	-	-	-	-	72/3704/253,254.
17	550	-	-	-	-	-	-	72/5528/58,50.
18	600	-	-	-	-	-	-	72/5551/253,254.

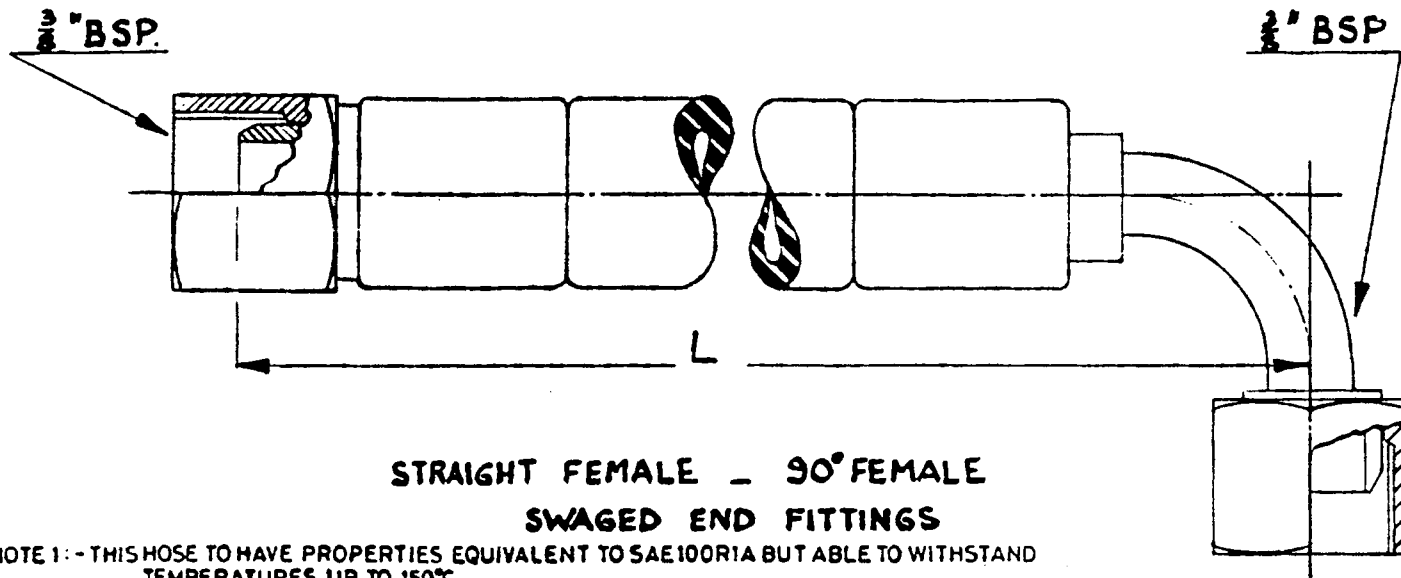
ISSUE LETTER	ALTERATION	INITIALS	DATE
A	ITEM 12 ADDED.	W/S	7/77
B	ITEM 12 DEL	W/S	7/77
C	ITEMS 2&3 CLASS 47/9 ADDED - 13&14 ADDED	W/S	7/79
D	ITEMS 15&16 ADDED	W/S	7/79
E	ITEM 3 CAT No WAS 72/1800. CLASS 252 DEL. CLASS 56 ADDED. - 4 & 5 ADDED. - 8 & 9 DEL.	W/S	7/80
F	ITEM 1 WAS CLASS 07. - 3 CAT. No WAS 16/2507. - 4 - - - 16/2502. - 5 - - - 16/2503. - 6 CLASS 58 ADDED. - 15 DEL.	W/S	7/80
G	NEW DRG No ADDED ITEM 07 DEL. - 17 ADDED. - 09 REINSTATED	W/S	7/80
H	ITEM 07 REINSTATED - 02 WAS 410 LONG	W/S	7/81
J	ITEM 13 CLASS 20 ADDED - 18 ADDED - 10 & 11 DEL.	W/S	7/82
K	ITEM 17 CLASS 50 ADDED	W/S	7/82
L	ITEM 07 CLASS 150 ADDED - 07 & 02 CLASS 141 ADDED	W/S	7/83
M	ITEMS 02 & 04 CLASS 142 ADDED	GH	6/85

FORMERLY BR DRG No.
L-A3-5611

TYPE P
RUBBER HOSE
9.5 mm BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	A	B	C	D	E
Drawing No	F	G	H	J	K
M-A3-9002935	L	M	N		
Drawn/Traced	Ch				



**STRAIGHT FEMALE - 90° FEMALE
SWAGED END FITTINGS**

* NOTE 1: - THIS HOSE TO HAVE PROPERTIES EQUIVALENT TO SAE 100R1A BUT ABLE TO WITHSTAND TEMPERATURES UP TO 150°C.

ISSUE LETTER	ALTERATION	DMA'S INITIALS	DATE
A	ITEM 3 CLASS 86 & 87 ADDED.	25	7/77
B	ITEM 14 ADDED.	25	7/77
C	ITEM 6 DEL.	25	7/77
D	ITEM 15 ADDED.	25	7/78
E	ITEM 16 ADDED.	25	7/78
F	ITEM 7 & 9 DEL. - 17 ADDED.	25	7/80
G	ITEM 3 CLASS 24 DEL - 15 DEL. - 16 CLASS WAS HST.	25	7/80
H	NEW DRG No. ADDED.	25	7/80
J	ITEM 18 ADDED.	25	7/80
K	NOTE ADDED:- CONTINUED ON M-A3-9009475	25	7/80
L	ITEMS 04 & 11 DEL.	25	7/80
M	ITEM 07 REINSTATED	25	7/80

ITEM No.	LENGTH L.m.m.	HOSE DATA				BR. CAT. NUMBER	VEHICLE / CLASS	
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C			REINFORCED BY
		S.A.E	B.S.S.					
01	305	100R1-A	3832-B1	155	-40 TO +93	1 WIRE BRAID	61/41038 454647.	
02	325	-	-	-	-	-	61/41039 47.	
03	420	-	-	-	-	-	61/41040 2526278687.	
04								
05	460	-	-	-	-	-	61/41041 47.	
06								
07	815	"	"	"	" " "	" " "	72/1817 BT 10	
08	915	-	-	-	-	-	61/41043 47.	
09								
10	1755	-	-	-	-	-	61/41044 47.	
11								
12	2440	-	-	-	-	-	61/41045 46.	
13	2845	-	-	-	-	-	61/41046 46.	
14	790	-	-	-	-	-	15/4111 DMU	
15								
16	650	-	-	-	-	-	72/3963 253254.	
17	335	-	-	-	-	-	61/41775 33.	
* 18	290	-	-	-	-40 TO +150	-	SEE NOTE 1 72/5532 253254.	

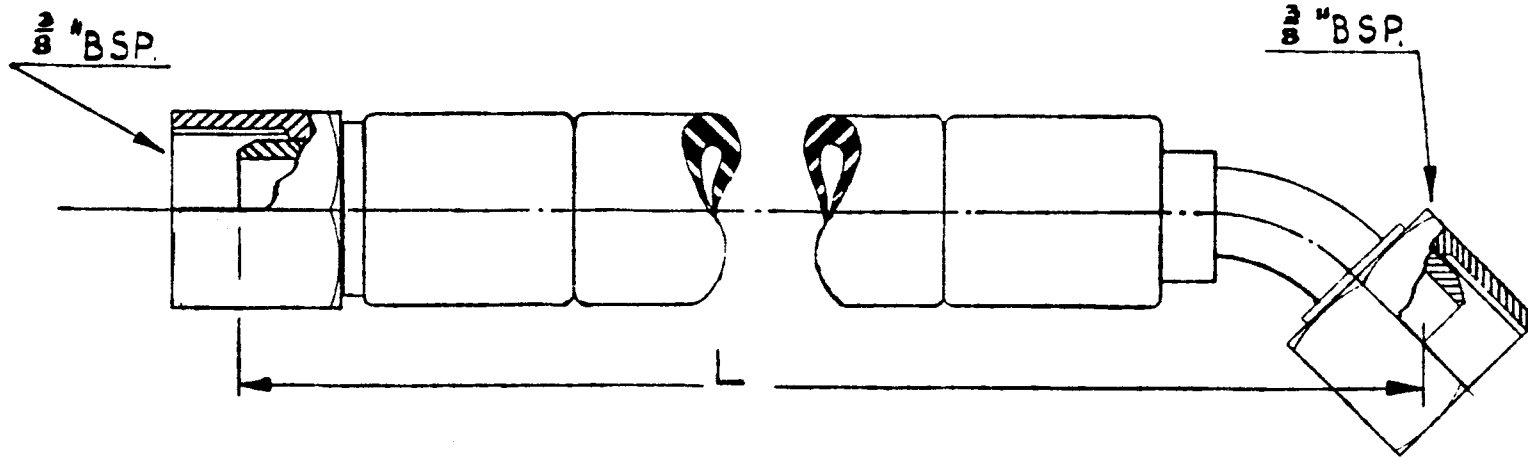
FORMERLY BR DRG.No.
L-A3-5620

**TYPE P
RUBBER HOSE
9.5 m.m. BORE**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

Scale	—	A	B	C	D	E
Drawing No	M-A3-9002936	F	G	H	J	K
Drawn	Traced	L	M			
Checked	Date					

JAN 75



STRAIGHT FEMALE - 135° FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DRAMAN'S INITIALS	DATE
A	ITEM 7 CLASS 47/9 ADDED. - 8 ADDED.		7/78
B	ITEM 8 CLASS HST ADDED.		7/79
C	ITEMS 9 & 10 ADDED.		7/79
D	ITEM 25 & 6 DEL. - 7 CLASS 47/6 DEL. - 8 CLASS HST DEL.		7/80
E	ITEM 8 CLASS 253 & 254 ADD.		7/80
F	NEW DRGM ADDED		7/80
G	ITEM 04 DEL.		7/80

ITEM No.	LENGTH L.m.m.	HOSE DATA				BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE ° C			REINFORCED BY
S.A.E.	B.S.S.						
01	430	100R1-A	3832-B1	155	-40 TO +93	1 WIRE BRAID	
02							
03	635	.	.	.	.	.
04							
05							
06							
07	890	.	.	.	.	.	61/41108 47/9
08	450	.	.	.	.	.	61/41515 47/9, 253, 254
09	1375	.	.	.	.	.	72/3972 253, 254
10	1245	.	.	.	.	.	72/3973 253, 254
11							
12							
13							
14							
15							
16							
17							
18							

FORMERLY BR DRGM No.
L-A3-5628

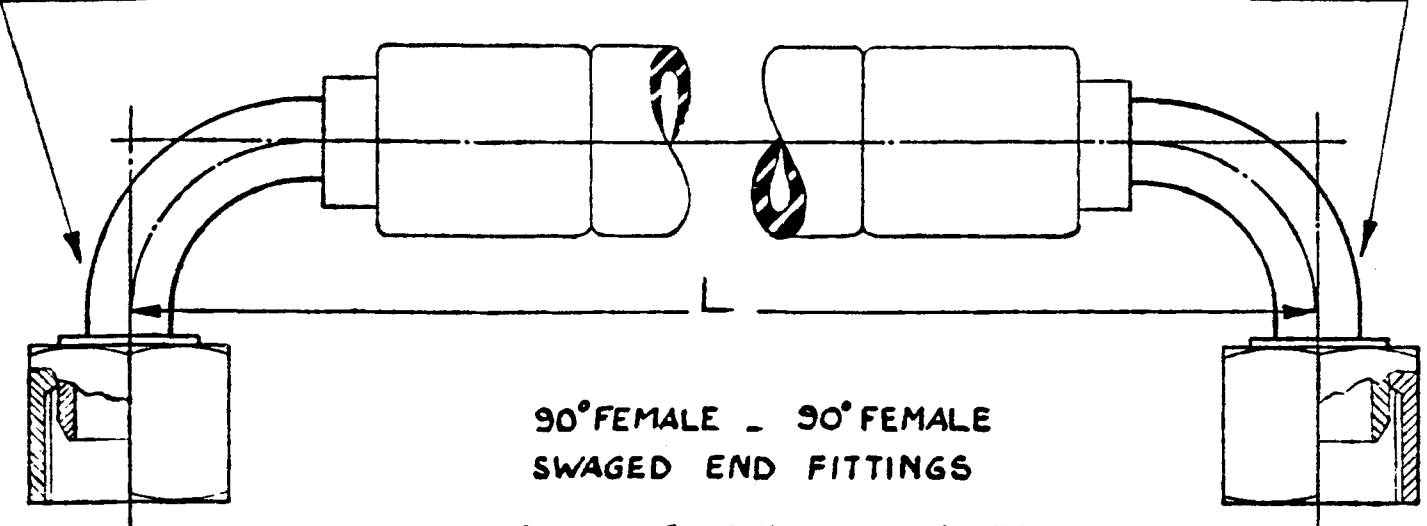
**TYPE P
RUBBER HOSE
9.5 m.m. BORE**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

Scale	A	B	C	D	E
Drawing No M-A3-9002937	F	G			
Drawn	Traced	Checked	Date		

3/8" BSP

3/8" BSP



90° FEMALE - 90° FEMALE
SWAGED END FITTINGS

ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH
THE COUPLING FURTHEST FROM THE EYE AT ZERO

ISSUE LETTER	ALTERATION	DRAWN INITIALS	DATE
A	ITEM 10 ADDED.	J.R.S.	1/78
B	ITEM 11 ADDED.	J.R.S.	1/80
C	ITEM 7 CLASS 27 DEL. - 10 CLASS WASH ST.	J.R.S.	1/80
D	NEW DRG. No. ADDED	J.R.S.	1/81
E	ITEM 01 CLASS 27 DELETED ITEM 12 ADDED ITEMS 03, 04, 05, 08 & 09 DELETED.	J.R.S.	5/83
F	ITEM 13 ADDED	J.R.S.	1/84
G	ITEM 14 ADDED	GH	6/85

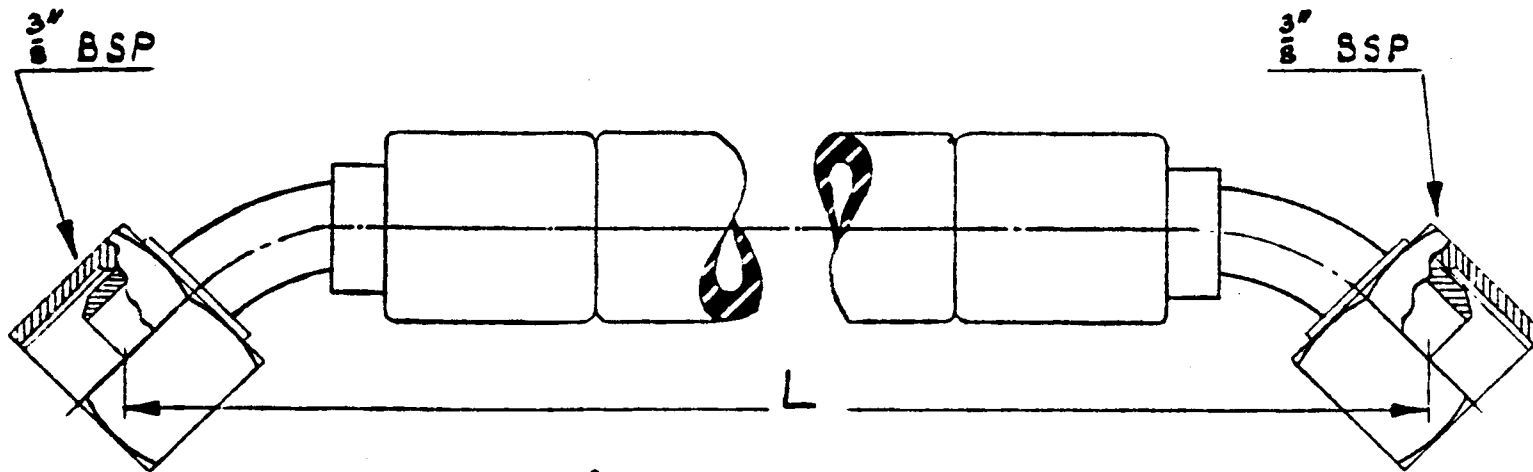
ITEM No.	LENGTH L.m.m.	HOSE DATA					ANGULAR RELATION	BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY			
		S.A.E.	B.S.S.						
01	250	100R1-A	3832-B1	155	-40 TO +93	WIRE BRAID	90°	61/41070	25.
02	360	"	"	"	"	"	90°	61/41071	33.
03									
04									
05									
06	395	"	"	"	"	"	90°	61/41072	25, 45, 46.
07	460	"	"	"	"	"	0°	61/41073	47.
08									
09									
10	300	"	"	"	"	"	0°	72/3706	25, 32, 54.
11	785	"	"	"	"	"	90°	61/41776	33.
12	220	"	"	"	"	"	90°	61/42067	27
13	500	"	"	"	"	"	180°	61/42175	47
14	1000	"	"	"	"	"	270°	70/15736	142
15									
16									
17									
18									

FORMERLY BR DRG. No.
L-A3-5636

**TYPE P
RUBBER HOSE
9.5 m.m. BORE**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

Scale	—	A	B	C	D	E
Drawing No	M-A3-9002938	F	G			
Drawn	J.R.S.	Traced		Checked		Date
						JAN 75



135° FEMALE - 135° FEMALE
 SWAGED END FITTINGS
 ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH
 THE COUPLING FURTHEST FROM THE EYE AT ZERO.

ISSUE LETTER	ALTERATION	DMAR'S INITIALS	DATE
A	ITEM 3 ADDED.		1/77
B	ITEMS 4 & 5 ADDED.		1/76
C	ITEM 6 ADDED.		1/76
D	ITEMS 4 & 5 CLASS WAS HST		7/76
E	NEW DRG No ADDED		1/76
F	ITEMS 01 & 02 DEL.		1/76
G	ITEM 06 DELETED		1/75

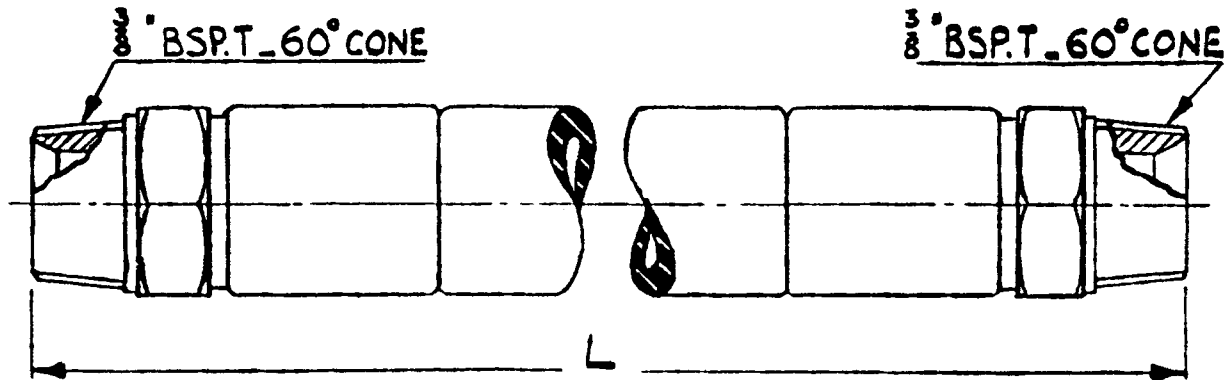
ITEM No.	LENGTH L-m.m.	HOSE DATA					ANGULAR RELATION	BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY			
		S.A.E	B.S.S.						
01									
02									
03	835	100RI-A	3832-B1	155	-40 TO +93	1 WIRE BRAID	180°	1412277 210.	
04	1060	.	.	.	.	.	270°	7213707 253254.
05	1200	.	.	.	.	.	270°	7213708 253254.
06									
07									
08									
09									
10									
11									
11									
12									
13									
14									
15									
16									
17									

FORMERLY BR DRG.No.
L-A3-5645

TYPE P
RUBBER HOSE
 9.5 m.m. BORE

**CHIEF MECHANICAL &
 ELECTRICAL ENGINEER**
BRITISH RAILWAYS BOARD
 STANDARDS & RATIONALIZATION
 DERBY

Scale	—	A	B	C	D	E
Drawing No	M-A3-9002940	F	G			
Drawn	Traced	Checked	Date			
						11/75



TAPER MALE - TAPER MALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	ENGINEER'S INITIALS	DATE
A	NEW DRG No ADDED	S	1/81

ITEM No	LENGTH L_m.m.	HOSE DATA				BR. CAT. NUMBER	VEHICLE / CLASS	
		SPECIFICATION SAE	SPECIFICATION BSS	WORKING PRESS. BAR.	TEMPERATURE ° C			REINFORCED BY
01	305	100R1-A	3832-B1	155	-40 to +93	1 WIRE BRAID	61/41002	47
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								

FORMERLY BR DRG No L-A3-5603

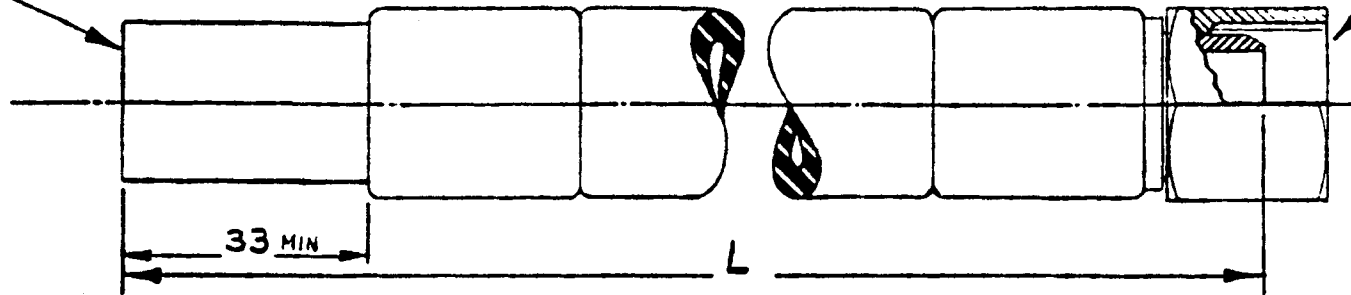
TYPE P
RUBBER HOSE
9.5 m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale	—	A			
Drawing No	M-A3-9002941				
Drawn	JRS	Traced	—	Checked	—
Date					JAN 75

Ø13" O-DIAM. HEAVY DUTY.

Ø13" BSP



STANDPIPE — STRAIGHT FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DRAWN INITIALS	DATE
A	STANDPIPE LENGTH WAS 33.5	V R S	6/76
B	STANDPIPE LENGTH WAS 35 → O.D. WAS 12"	P R	7/76
C	NEW DRG No ADDED	S S	1/81

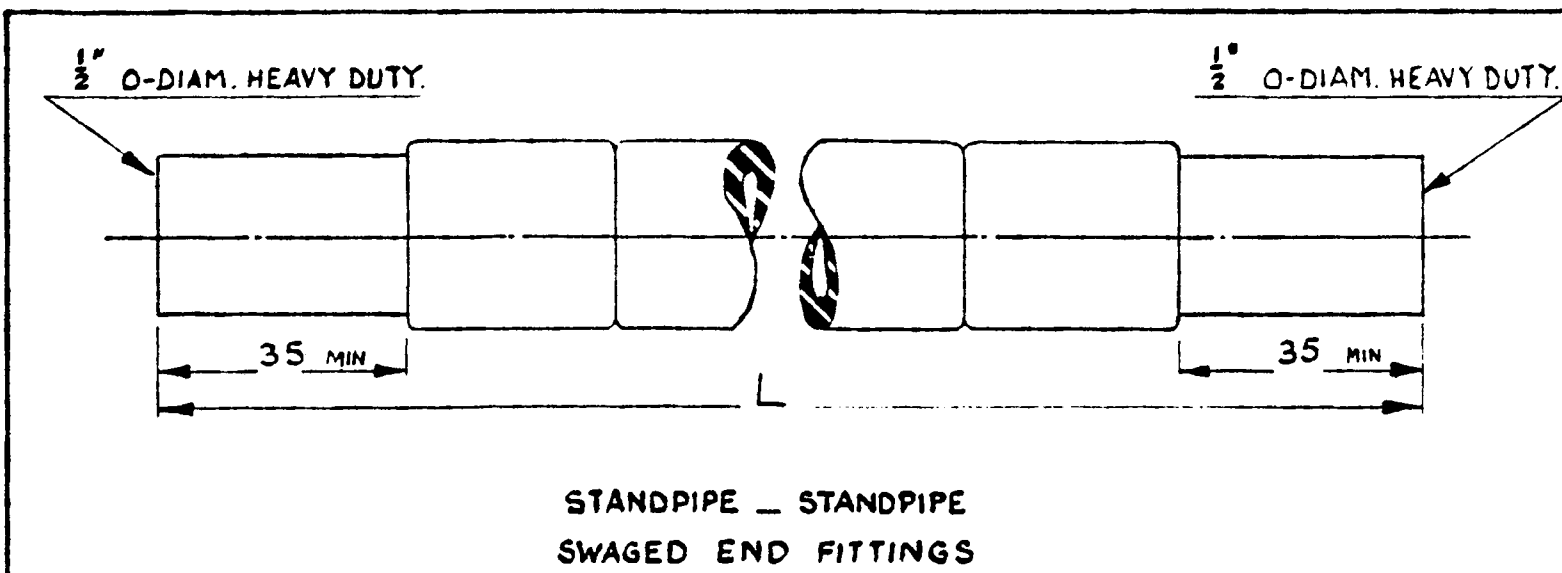
ITEM No.	LENGTH L-mm	HOSE DATA				BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C			REINFORCED BY
SAE	BSS						
01	380	100R1-A	3832-B1	155	-40 to +93	1 WIRE BRAID	
02	420	"	"	"	"	"	
03	460	"	"	"	"	"	
04	470	"	"	"	"	"	
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							

FORMERLY BR DRG No L-A3-5633

TYPE P
RUBBER HOSE
9.5 m.m. BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale	A	B	C
Drawing No M-A3-9002942			
Drawn / Traced / Checked / Date			JAN 77



ISSUE LETTER	ALTERATION	ISSUE INITIALS	DATE
A	STANDPIPE LENGTH WAS 33.5	R.S.	6/76
B	ITEMS 8 & 10 DEL.	R.S.	3/80
C	NEW DRG No ADDED ITEM 02 CLASS 24844 DEL. - 05 - 44 DEL.	S.B.	1/81
D	ITEM 05 DMU ADDED - 13814 ADDED.	R.S.	1/82
E	ITEM 02 DMU ADDED.	R.S.	7/82
F	ITEMS 01 & 12 DELETED	R.S.	9/85

ITEM No.	LENGTH L. mm	HOSE DATA					BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	BSS	WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY		
01								
02	295	100R1-A	3832-B1	155	-40 TO +93	1 WIRE BRAID	61/41092	25,45,46,DMU.
03	355	"	"	"	"	"	61/41093	26,27
04	380	"	"	"	"	"	14/1907	DMU
05	405	"	"	"	"	"	61/41094	25,DMU.
06	420	"	"	"	"	"	14/1909	DMU
07	510	"	"	"	"	"	14/1908	DMU
08								
09	660	"	"	"	"	"	14/1910	DMU
10								
11	725	"	"	"	"	"	14/1911	DMU
12							61/41015	45
13	460	"	"	"	"	"	14/2725	DMU
14	570	"	"	"	"	"	14/2726	DMU
15								
16								
17								
18								

FORMERLY BR DRG No
L-A3-5654

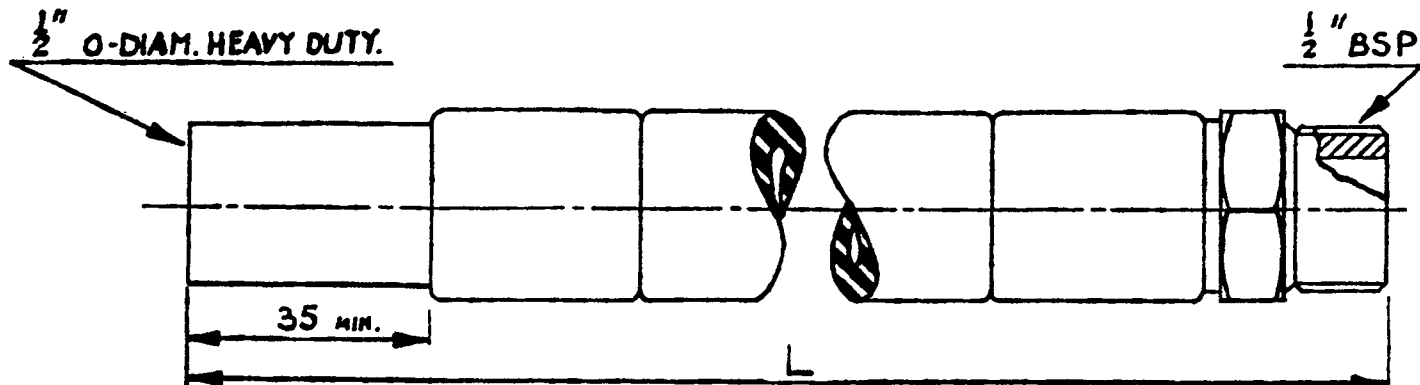
**TYPE P
RUBBER HOSE
9.5 m.m. BORE**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

Scale — A B C D E
F

Drawing No
M-A3-9002943

Drawn Traced Checked Date
R.S. — — — 1.1.85



STANDPIPE - PARALLEL MALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DRAWN'S INITIALS	DATE
A	STANDPIPE LENGTH WAS 33.5	JRS	6/2/75
B	NEW DRG No ADDED.	JRS	1/1/76

ITEM No.	LENGTH L_m.m.	HOSE DATA					BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	BSS	WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY		
01	410	100R1-A	3832-B1	155	-40 to +93	WIRE BRAID	61/41001	27
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								

FORMERLY BR DRG No L-A3-5601

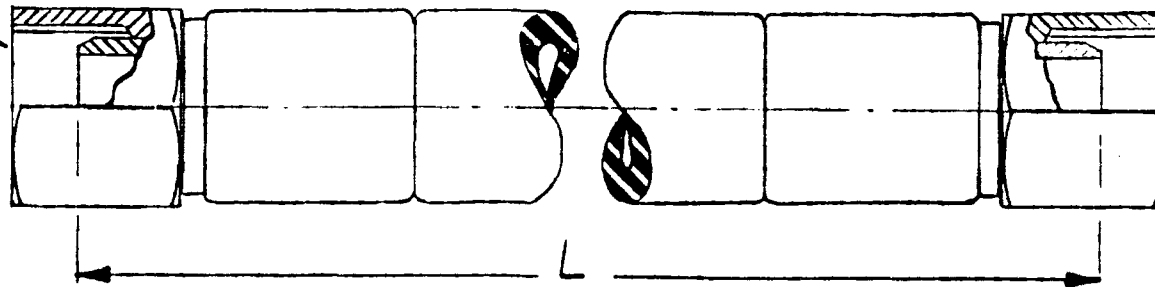
TYPE P
RUBBER HOSE
9.5 m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS+RATIONALIZATION
DERBY

Scale	—	A	B		
Drawing No.	M-A3-9002944				
Drawn	JRS	Traced	—	Check'd	—
Date	JAN 75				

1/2" BSP.

1/2" BSP.



**STRAIGHT FEMALE - STRAIGHT FEMALE
SWAGED END FITTINGS**

ISSUE LETTER	ALTERATION	DMAN'S INITIALS	DATE
A	ITEM 2 CLASS 47 ADDED	4/2	7/75
B	ITEM 3 CLASS 253 ADDED	4/2	7/75
C	ITEMS 9&10 LENGTHS WERE 1000&1400.	4/2	7/75
D	ITEM 11 ADDED	4/2	7/75
E	ITEM 12 ADDED	4/2	7/77
F	ITEM 13 ADDED	4/2	7/77
G	ITEM 1 WAS CLASS 252 - 2 CLASSES 253 & 254 ADDED. - 3 CLASS 252 DEL. - 254 ADDED. - 4 & 6 DEL. - 9 & 10 CLASS 254 ADDED - 14 ADDED.	4/2	7/80
H	NEW DRG. No ADDED ITEM 01 CLASS 85 & 87 ADDED FOR MODS FM 6471/0018 FM 6481/001.	4/2	7/80
J	ITEM 11 CLASS 31 ADDED	4/2	7/81
K	ITEMS 03 & 12 CLASS 370(P) ADDED.	4/2	7/81
L	ITEM 15 & 16 ADDED	4/2	7/81
M	ITEMS 17 & 18 ADDED - 08 CLASS 8772 ADDED	4/2	7/82
N	ITEM 02 CLASS 141 ADDED	4/2	7/82
P	ITEM 15 CP1 BOGIE ADDED	4/2	7/82
Q	ITEM 13 CLASS 37 ADDED	4/2	7/82
R	ITEM 02 CLASS 142 ADDED	GH685	

ITEM No	LENGTH L.m.m.	HOSE DATA					BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY		
SAE	BSS							
01	305	100R1-A	3832-B1	138	-40 TO +93	1 WIRE BRAID	EXP. DL/694	72/1803 56,8687.
02	635	-	-	-	-	-	-	61/41018 45-47,253,254,14,142
03	675	-	-	-	-	-	-	72/1804 253,254,370(P).
04								
05								
06								
07	2970	-	-	-	-	-	-	51/16007 37.
08	1120	-	-	-	-	-	-	61/41019 27,872.
09	940	-	-	-	-	-	-	72/1808 253,254.
10	1340	-	-	-	-	-	-	72/1809 253,254.
11	200	-	-	-	-	-	-	71/2559 56,31.
12	575	-	-	-	-	-	-	14/2253 210,370(P).
13	1650	-	-	-	-	-	-	14/2267 210,37
14	980	100R2-A	3832-B2	300	-	2 WIRE BRAID	-	72/4583 58.
15	470	100R1-A	3832-B1	138	-	1	-	51/87053 50, CP1 BOGIE.
16	530	-	-	-	-	-	-	63/8197 MKIII
17	410	-	-	-	-	-	-	51/41551 31.
18	270	-	-	-	-	-	-	90/10581 87/2.

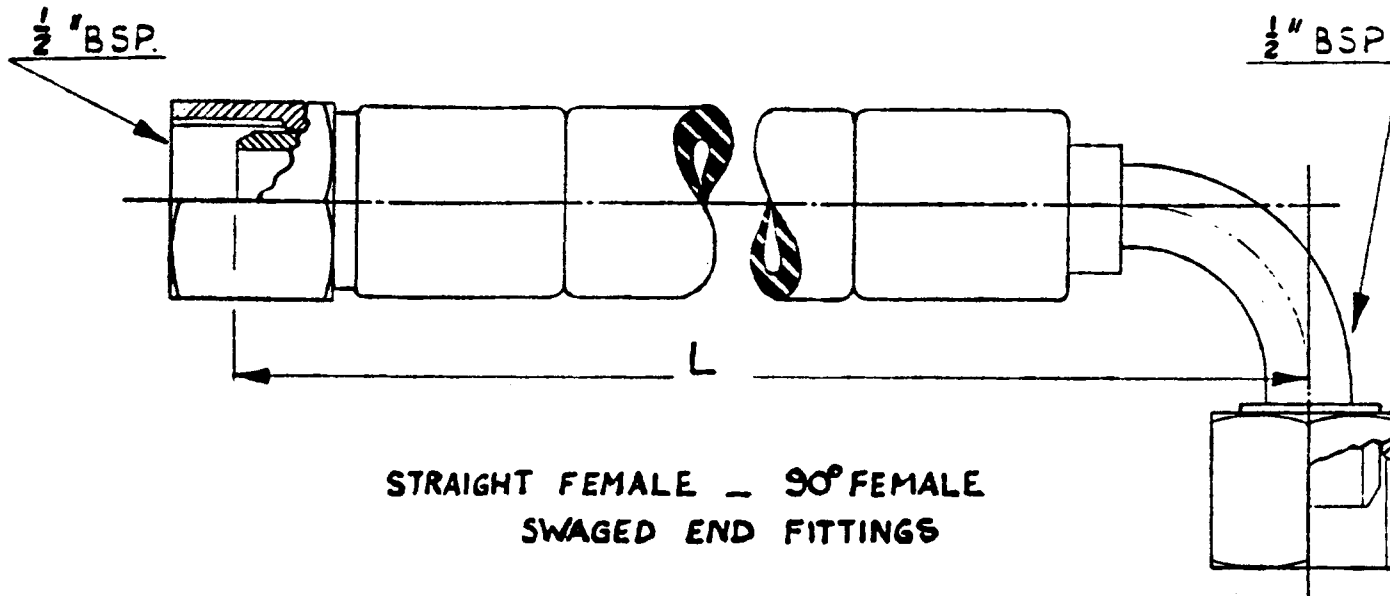
FORMERLY BR DRG.No. L-A3-5612

**TYPE P
RUBBER HOSE
12.7 m.m. BORE**

**CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

Scale — R A B C D E
F G H J K
L M N P Q

Drawing No M-A3-9002945
Drawn Traced Checked Date
JR 5 — — —



ISSUE LETTER	ALTERATION	DRAWN'S INITIALS	DATE
A	ITEM 9 ADDED	P.R.	10/77
B	ITEM 10 & 11 ADDED	P.R.	11/77
C	ITEM 3, 4, 5 & 6 DEL. ITEM 7 WAS 47/6	P.R.	7/80
D	NEW DRG No ADDED	S.B.	1/81
E	ITEM 12 ADDED	P.R.	10/81
F	ITEM 02 DEL.	P.R.	4/82
G	ITEM 13 & 14 ADDED 09 CLASS 150 ADDED	P.R.	8/83
H	ITEM 15 & 16 ADDED	P.R.	1/85
J	ITEM 12, 15, 16 ADDED	P.R.	1/86
K	ITEM 16 RB 002 & 004 ADDED	P.R.	1/86
L	ITEMS 17 & 18 ADDED	P.R.	1/86
M	ITEMS 10 & 11 DELETED	P.R.	1/86

ITEM No.	LENGTH L. m.m.	HOSE SPECIFICATION		WORKING PRESS. BAR	DATA		BR. CAT. NUMBER	VEHICLE/ CLASS
		SAE	B.S.S.		TEMPERATURE °C	REINFORCED BY		
01	300	100R1-A	3832-B1	138	-40 TO +93	1 WIRE BRAID	61/41047	47.RB005.
02								
03								
04								
05								
06	5150	"	"	"	"	"	51/87003	50
07	1300	"	"	"	"	"	61/41048	47/9
08								
09	590	"	"	"	"	"	14/2255	210,150
10							14/2270	210
11							14/2271	210
12	4000	"	"	"	"	"	51/87013	50
13	960	100R2-A	3832-B2	241	"	2 WIRE BRAID	15/78076	150
14	700	100R1-A	3832-B1	138	"	1 " "	15/78077	150
15	500	100R2 A	3832-B2	241	"	2 WIRE BRAID	15/78144	150, RB005.
16	420	"	"	"	"	"	15/78145	150 RB002 & 004
17	1800	100R1-A	3832-B1	138	"	1 WIRE BRAID	15/78543	150/1
18	2000	"	"	"	"	"	15/78544	150/1

FORMERLY BR DRG No
L-A3-5621

**TYPE P
RUBBER HOSE
12.7 m.m. BORE**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY**

Scale _____

A	B	C	D	E
F	G	H	J	K
L	M			

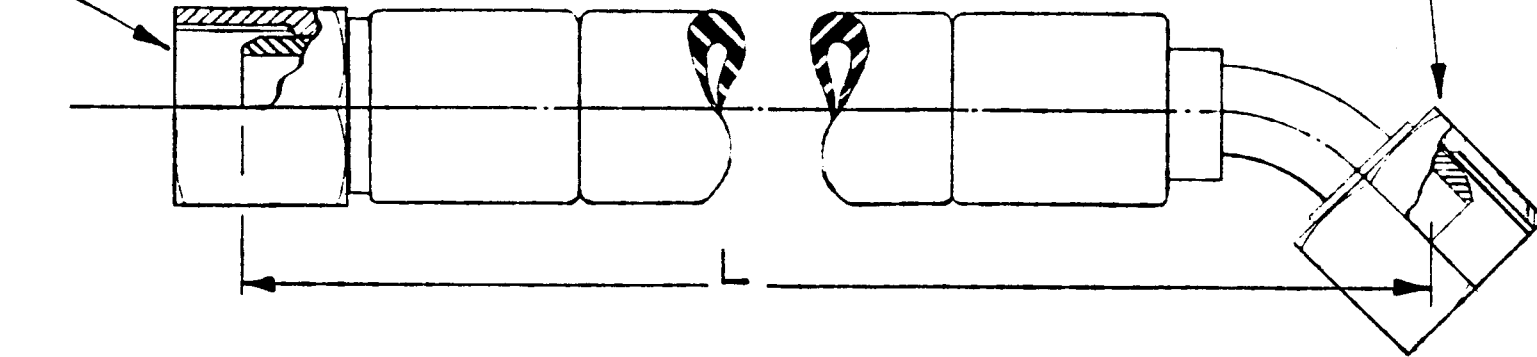
Drawing No **M-A3-9002946**

Drawn | Traced | Checked | Date

J.S. | | | JAN 77

1/2" BSP.

1/2" BSP.



STRAIGHT FEMALE - 135° FEMALE
SWAGED END FITTINGS

* NOTE 1:- THIS HOSE TO HAVE PROPERTIES EQUIVALENT TO SAE 100RIA BUT ABLE TO WITHSTAND TEMPERATURES UP TO 150°C.

ISSUE LETTER	ALTERATION	DRAWN INITIALS	DATE
A	ITEM 1 CLASS 252 DEL. ITEM 2 DEL. ITEM 1 DEL AS PER ENG. INST. LD/845 ITEMS 3, 4 & 5 ADDED		
B	NEW DRG No ADDED		
C	ITEM 03 DEL.		
D	ITEM 06 ADDED		
E	ITEM 07 ADDED		
F	ITEM 08 & 09 ADDED		
G	ITEM 08 LTH WAS 350 - 09 - - 500		
H	ITEM 10 ADDED		
J	ITEM 11 ADDED		
K	ITEM 12 ADDED		

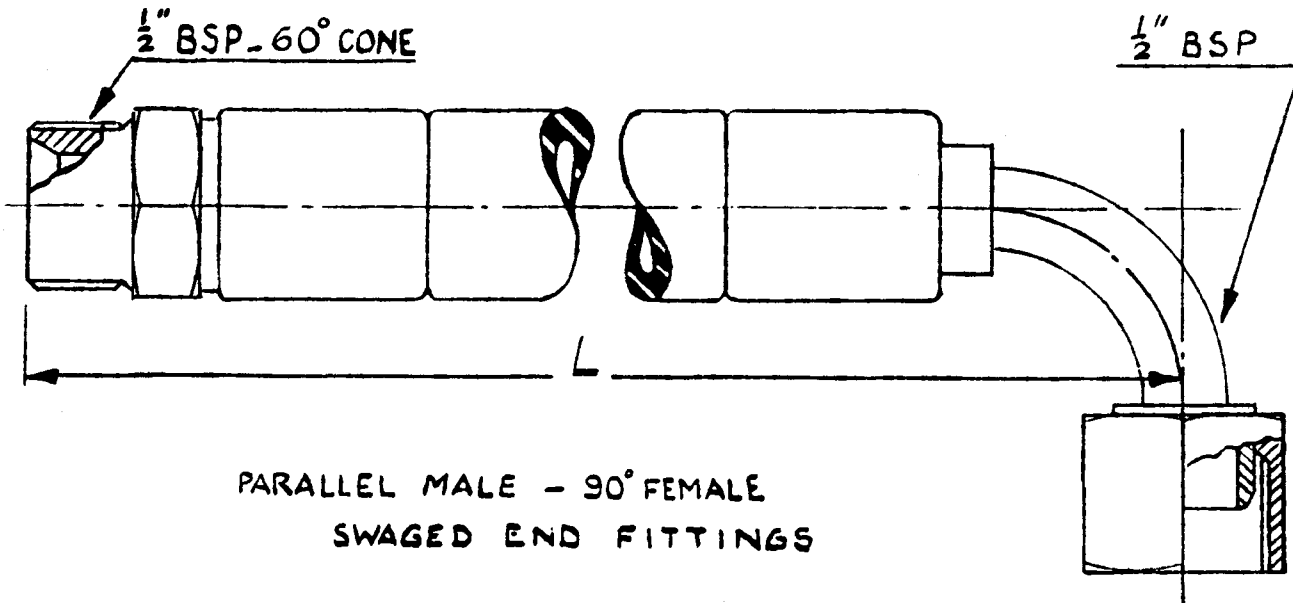
ITEM No.	LENGTH L.m.m.	HOSE DATA				BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C			REINFORCED BY
		E.A.E.	B.S.S.				
01							
02							
03							
04	1260	100R1-A	3832-B1	138	-40 TO +93	1 WIRE BRAID	
05	1320	"	"	"	"	"	
* 06	890	"	"	"	-40 TO +150	"	SEE NOTE 1
07	780	"	3832-B1	"	-40 TO +93	"	
08	435	"	"	"	"	"	
09	675	"	"	"	"	"	
10	2300	"	"	"	"	"	15/78004
11	310	"	"	"	"	"	
12	1100	"	"	"	"	"	
13							
14							
15							
16							
17							
18							

FORMERLY BR DRG.No.
L-A3-5629

TYPE P
RUBBER HOSE
12.7 m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	A	B	C	D	E
Drawing No M-A3-9002947	F	G	H	J	K
Drawn	Traced	Checked	Date		



ALTERATION		ISSUE LETTER	DATE
A	FIRST ISSUE		12/78
B	NEW DRG No ADDED	SB	7/91

ITEM No	LENGTH L-mm	HOSE DATA					BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY		
		SAE	BSS					
01	700	100R1-A	3832-B1	138	-40 to +93	1 WIRE BRAID	61/41640	45
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								

FORMERLY BR DRG No L-A3-11882

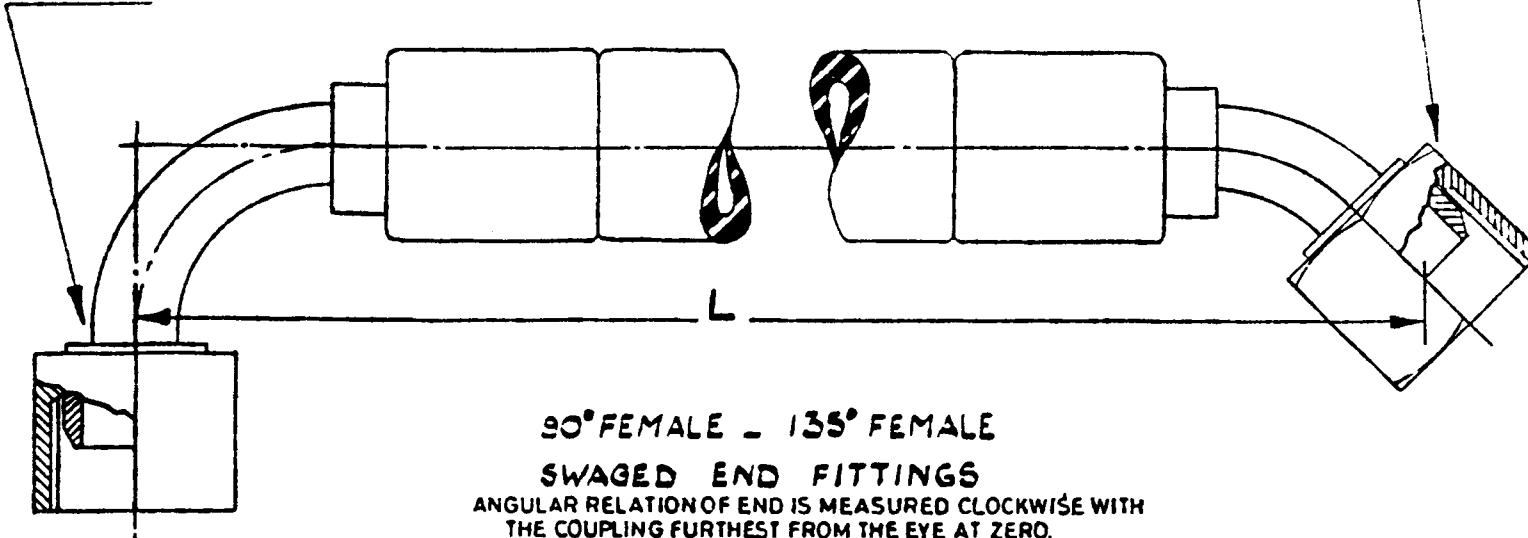
TYPE P
RUBBER HOSE
12.7 mm BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER.
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale		A	B		
Drawing No	M-A3-9002948				
Drawn	JES	Traced		Checked	Date
					12/78

1/2" BSP

1/2" BSP



90° FEMALE - 135° FEMALE
SWAGED END FITTINGS
ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH
THE COUPLING FURTHEST FROM THE EYE AT ZERO.

ITEM No.	LENGTH L.m.m.	HOSE DATA					ANGULAR RELATION	BR. CAT. NUMBER	VEHICLE/ CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY			
		S.A.E	B.S.S.						
01	390	100R1-A	3832-B1	138	-40 TO +93	1 WIRE BRAID	180°	51/16041	46T.GLW
02									
03									
04	1400	100R10-A	4586-2	430	. . .	4 SPRALHEAVY	90°	72/5515	58.
05	900	100R1-A	3832-B1	138	. . .	1 WIRE BRAID	270°	---	RB005.
06	400	100R2-A	3832-B2	241	. . .	2 WIRE BRAID	0°	---	RB002 & 004.
07	570	100R1-A	3832-B1	138	. . .	1 . . .	90°	51/16467	37.
08	700	"	"	"	. . .	. . .	270°	51/16468	37.
09	600	"	"	"	. . .	. . .	0°	51/16469	37.
10	650	"	"	"	. . .	. . .	180°	15/78542	150/1
11	754	"	"	190	" " "	" " "	180°	61/42326	47
12	786	"	"	190	" " "	" " "	180°	61/42327	47

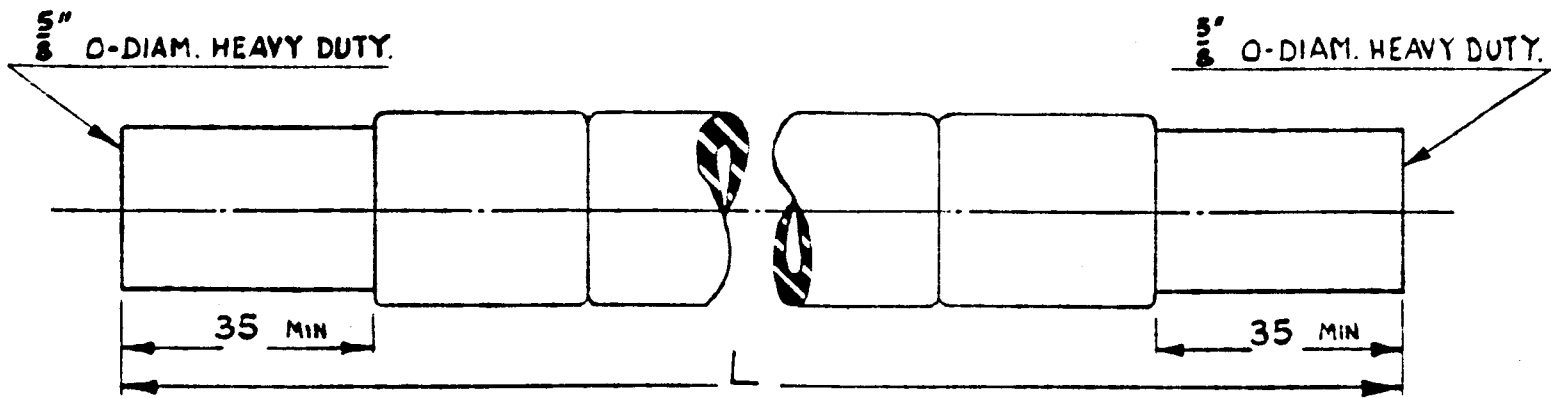
ISSUE LETTER	ALTERATION	SWAG'S INITIALS	DATE
A	NEW DRG No ADDED. ITEM 04 ADDED.		24/1/60
B	ITEM 01 CLASS 55 DEL. WAGON REF. ADD. ITEM 02 & 03 DEL.	M	24/1/60
C	ITEM 05 ADDED		24/1/60
D	ITEM 06 ADDED.		24/1/60
E	ITEMS 07-09 ADDED		24/1/60
F	ITEM 10 ADDED	R	24/1/60
G	ITEMS 11 & 12 ADDED		24/1/60

FORMERLY BR DRG.No. L-A3-5650

TYPE P
RUBBER HOSE
12.7m.m. BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	A	B	C	D	E
Drawing No M-A3-9002950	F	G			
Drawn	Traced	Checked	Date		



STANDPIPE - STANDPIPE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	ISSUERS INITIALS	DATE
A	STANDPIPE LENGTH WAS 36.5.	R.S.	6/76
B	ITEM 2 ADDED	R.S.	5/77
C	ITEM 1 DELETED	R.S.	1/80
D	NEW DRG No ADDED	SB	1/81
E	ITEM 02 LENGTH WAS 305	R.S.	4/76

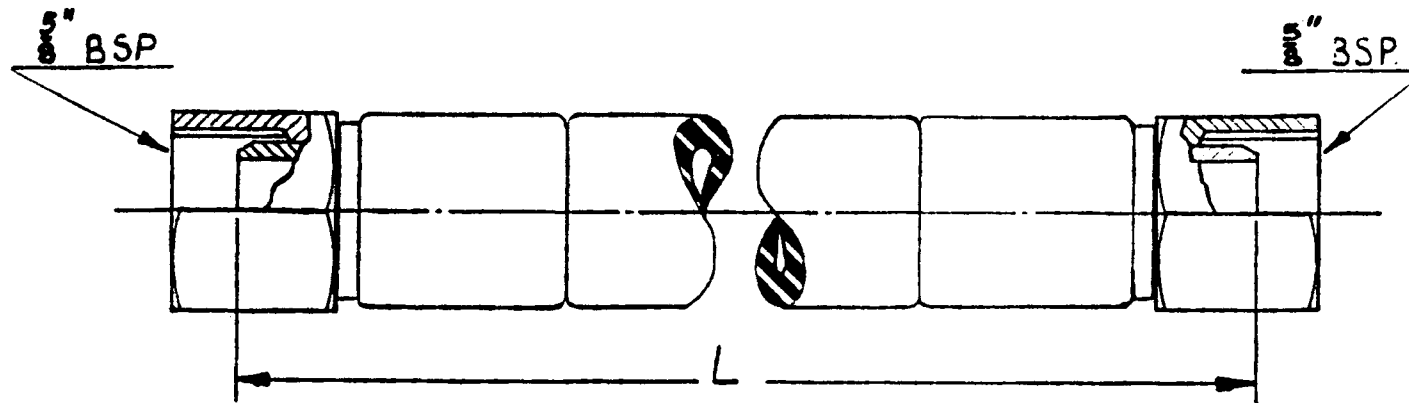
ITEM No.	LENGTH L.m.m	HOSE DATA				BR. CAT. NUMBER	VEHICLE / CLASS	
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C			REINFORCED BY
		SAE	BSS					
01								
02	315	100R1-A	3832-B1	138	-40 to +93	1 WIRE BRAID		
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								

FORMERLY BR DRG No L-A3-5657

TYPE P
RUBBER HOSE
12.7 m.m. BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale	—	A	B	C	D	E
Drawing No	M-A3-9002954					
Drawn	Traced	Checked	Date			
						JAN 75



STRAIGHT FEMALE - STRAIGHT FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	ISSUERS INITIALS	DATE
A	ITEM 5 ADDED	R ₅	11/76
B	ITEM 5 WAS 460 LONG	R ₅	3/77
C	ITEM 5 DELETED	S ₆	7/80
D	NEW DRG No ADDED	S ₆	1/81

ITEM No	LENGTH L.m.m.	HOSE DATA					BR. CAT. NUMBER	VEHICLE/ CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY		
		SAE	BSS					
01	435	100R1-A	3832-B1	103	-40 to +93	1 WIRE BRAID	51/87000	50
02	560	"	"	"	"	"	51/16008	37
03	610	"	"	"	"	"	51/16009	20
04	915	"	"	"	"	"	51/16010	37
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								

FORMERLY BR DRG No
L-A3-5613

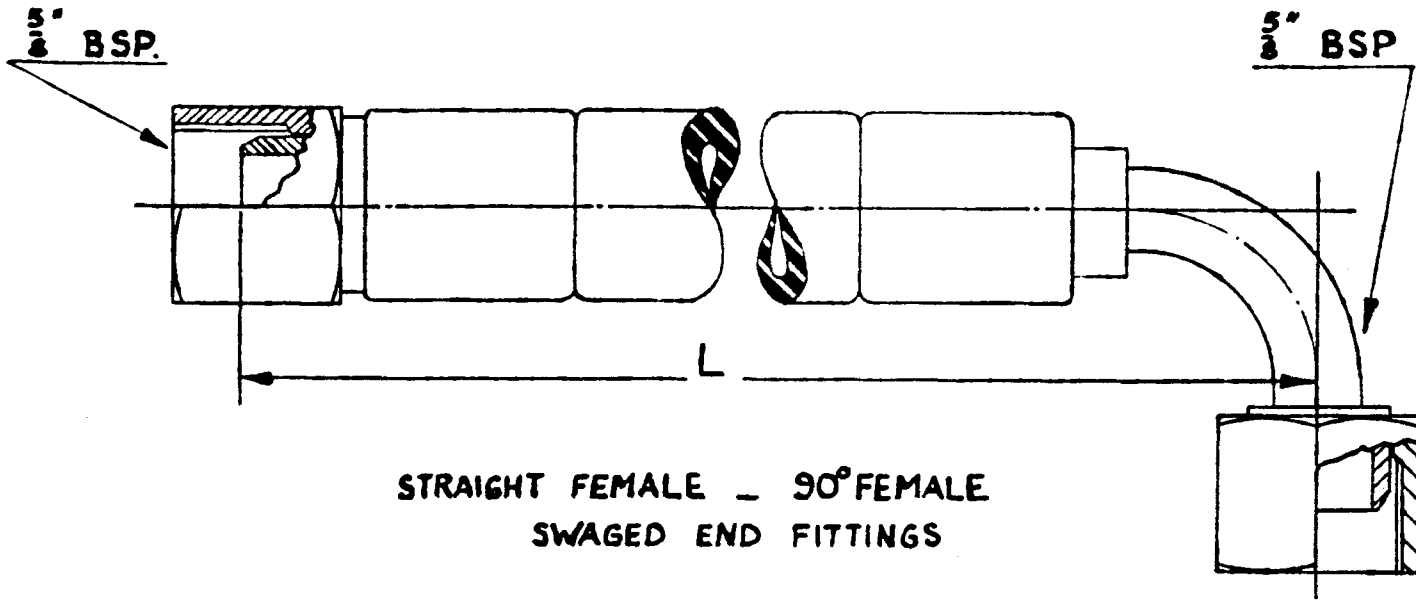
TYPE P
RUBBER HOSE
15.9 m.m. BORE

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER**
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale A B C D

Drawing No
M-A3-9002955

Drawn Traced Checked Date



STRAIGHT FEMALE - 90° FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DRAWN'S INITIALS	DATE
A	ITEM 2 ADDED	SS	11/77
B	NEW DRG No ADDED	SS	11/77
C	ITEM 02 DELETED	SS	8/85

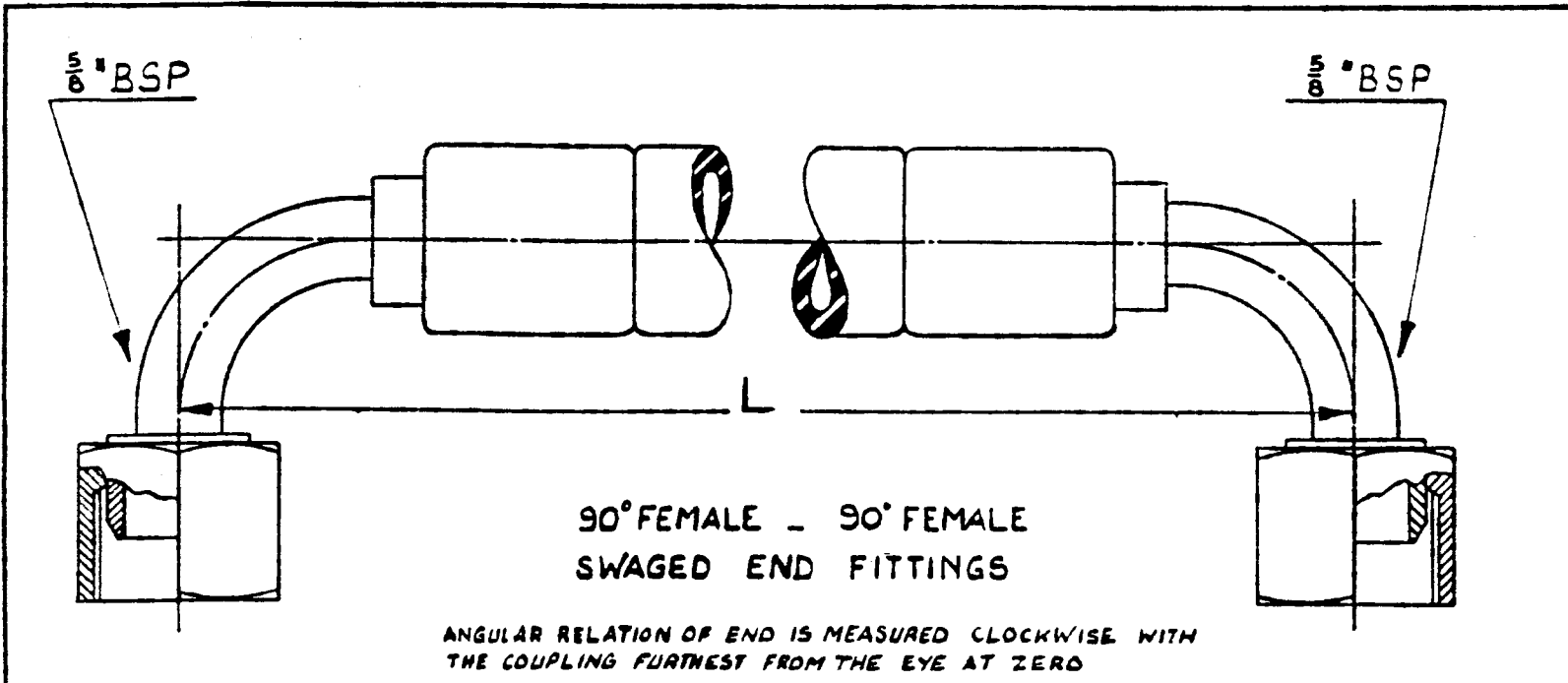
ITEM No.	LENGTH L. m.m.	HOSE DATA				BR. CAT. NUMBER	VEHICLE/ CLASS	
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C			REINFORCED BY
		S.A.E.	B.S.S.					
01	965	100R1-A	3832-B1	103	-40 To +93	1 WIRE BRAID	77/1301	03
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								

FORMERLY BR DRG No L-A3-5622

**TYPE P
RUBBER HOSE
15.9 m.m. BORE**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY**

Scale	A	B	C
Drawing No M-A3-9002956			
Drawn/Traced	Checked	Date	



ISSUE LETTER	ALTERATION	DRAWN'S INITIALS	DATE
A	NEW DRG No ADDED		18/1/01

ITEM No.	LENGTH L.m.m.	HOSE DATA					ANGULAR RELATION	BR. CAT. NUMBER	VEHICLE/ CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY			
		S.A.E.	B.S.S.						
01	405	100R1-A	3832-B1	103	-40 to +93	1 WIRE BRAID	180°	77/1302	03
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									

FORMERLY BR DRG No
L-A3-5638

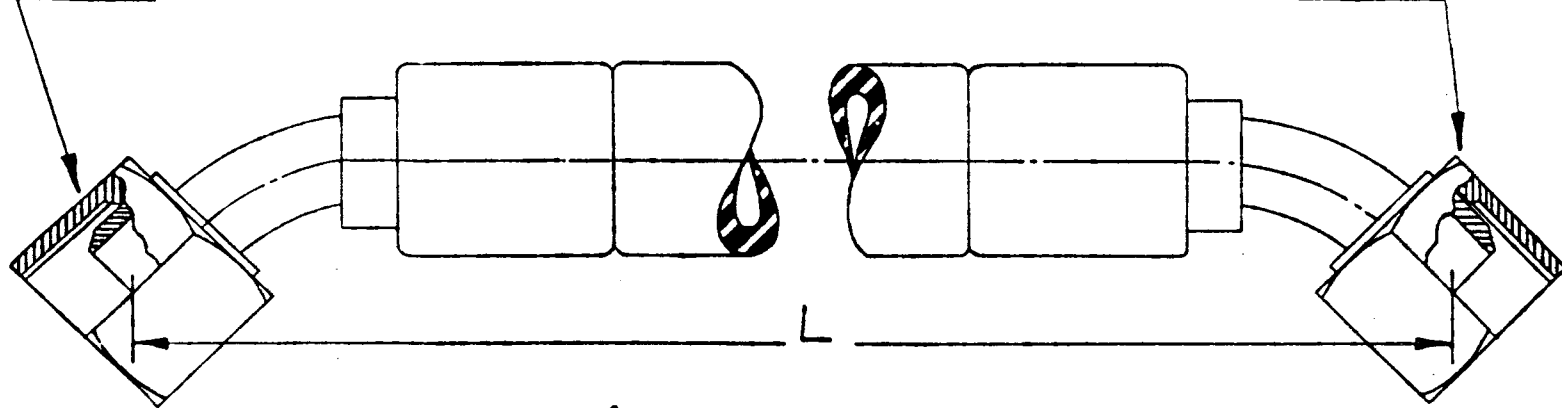
TYPE P
RUBBER HOSE
15.9 m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	—	A			
Drawing No	M-A3-9002958				
Drawn	Traced	Checked	Date		

8 1/2" BSP

8 1/2" BSP



135° FEMALE - 135° FEMALE
SWAGED END FITTINGS

ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH
THE COUPLING FURTHEST FROM THE EYE AT ZERO

ISSUE LETTER	ALTERATION	DATE
A	ITEM 2 ADDED	5/13/75
B	ITEM 1, CLASS 254 ADDED	5/2/60
C	NEW DRG No ADDED, S.B. 1/81 HOSE SPEC. DID READ B.S.S. 3831-B1.	MFD

ITEM No.	LENGTH L.m.m.	HOSE DATA					ANGULAR RELATION	BR. CAT. NUMBER	VEHICLE/ CLASS
		SPECIFICATION S.A.E.	B.S.S.	WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY			
01	750	100R1-A	3832-B1	103	-40 to +93	1 WIRE BRAID	270°	72/1829	253, 254
02	320	"	"	"	"	"	0°	72/3937	253, 254
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									

FORMERLY BR DRG No L-A3-5602

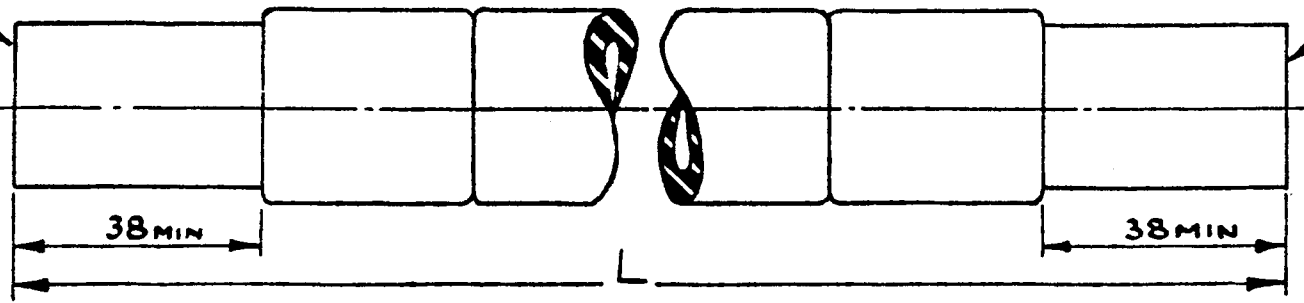
TYPE P
RUBBER HOSE
15.9 m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale	—	A	B	C
Drawing No	M-A3-9002959			
Drawn	Traced	Checked	Date	
JRS			7/75	

1 1/2" O-DIAM. HEAVY DUTY.

1 1/2" O-DIAM. HEAVY DUTY.



STANDPIPE - STANDPIPE
SWAGED END FITTINGS.

ISSUE LETTER	ALTERATION	DRAWN'S INITIALS	DATE
A	ITEM 2 ADDED	SB	12/77
B	NEW DRG No ADDED	SB	1/81
C	ITEMS 03-06 ADDED.	RV	7/78

ITEM No.	LENGTH L-mm	HOSE DATA					BR. CAT. NUMBER	VEHICLE/ CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY		
		SAE	BSS					
01	385	100R1-A	3832-B1	103	-40 to +93	1 WIRE BRAID	61/41095	26,27
02	635	"	"	"	"	"	14/94729	DMU
03	425	"	"	"	"	"	14/2727	DMU
04	665	"	"	"	"	"	14/2728	DMU
05	720	"	"	"	"	"	14/2729	DMU
06	815	"	"	"	"	"	14/2730	DMU
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								

FORMERLY BR DRG No
L-A3-5658

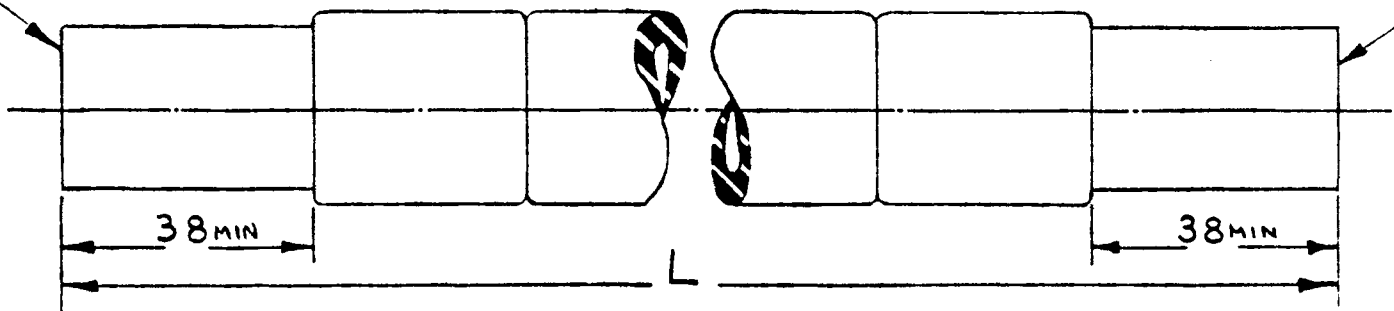
TYPE P
RUBBER HOSE
15.9 mm BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	—	A	B	C		
Drawing No	M-A3-9002960					
Drawn	Traced	Checked	Date			

27"
32 O-DIAM. HEAVY DUTY.

27"
32 O-DIAM. HEAVY DUTY.



STANDPIPE - STANDPIPE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DRAWN INITIALS	DATE
A	STANDPIPE LENGTH WAS 40.	JRS	6/76
B	NEW DRG No ADDED	JRS	1/77

ITEM No.	LENGTH L-mm	HOSE DATA					BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	BSS	WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY		
01	460	100R1-A	3832-B1	103	-40 to +93	1 WIRE BRAID	61/41096	33
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								

FORMERLY BR DRG No L-A3-5659

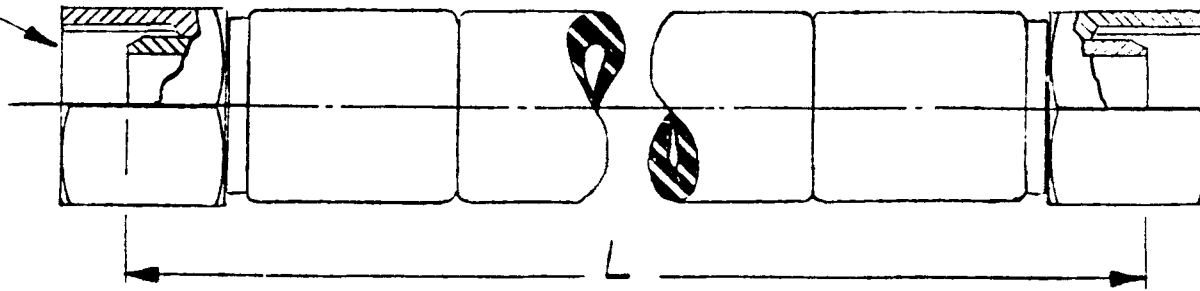
TYPE P
RUBBER HOSE
15.9 m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale	—	A	B		
Drawing No	M-A3-9002961				
Drawn	JRS	Traced	Checked	Date	1/77

1 1/2" BSP

3/4" BSP



STRAIGHT FEMALE - STRAIGHT FEMALE
SWAGED END FITTINGS

ISSUE	ALTERATION	INITIALS	DATE
S	ITEM 12 DELETED		2/8/59
T	ITEM 02 LTH WAS 490.		2/2/59

ITEM No	LENGTH L.m.m.	HOSE DATA				BR. CAT. NUMBER	LOCOMOTIVE CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C			REINFORCED BY
		SAE	BSS				
01	355	100R1-A	3832-B1	86	-40 to +93	1 WIRE BRAID	51/87001 56
02	482	"	"	"	"	"	72/1810 253,254
03	565	"	"	"	"	"	72/1811 253,254
04	300	"	"	"	"	"	71/2394 56
05	890	100R2-A	3832-B2	155	"	2 WIRE BRAID	61/41020 47
06							
07	1070	100R1-A	3832-B1	86	"	1 WIRE BRAID	61/41021 27,142
08	915	"	"	"	"	"	61/41022 47/9,253,254
09							
10	280	"	"	"	"	"	71/2557 56
11	450	"	"	"	"	"	14/2268 210 MKIII
12							
13	1140	"	"	"	"	"	70/14523 56
14	650	"	"	"	"	"	72/4584 58,31,87 MKIII
15							
16	1550	"	"	"	"	"	72/5529 58
17	1980	"	"	"	"	"	15/80132 141
18	1000	"	"	"	"	"	15/78012 150

ISSUE LETTER	ALTERATION	INITIALS	DATE
A	ITEM 9 DEL.		2/8/59
B	ITEM 3 CLASS 253 ADDED.		2/1/59
C	ITEM 1 CLASS 56 ADDED. " 10 ADDED.		2/7/59
D	ITEMS 11 & 12 ADDED.		2/7/59
E	ITEM 2 LTH WAS 535.		2/7/59
F	ITEM 4 ADDED. " 6 DEL. " 2 & 3 CLASS 252 DEL. " CLASS 254 ADDED. " 8 WAS CLASS 4716.		2/10/59
G	ITEM 4 CAT. No WAS 71/2394. " 13 & 14 ADDED.		2/10/59
H	ITEM 4 CAT. No WAS 16/2506. " 8 CLASS 253 & 254 ADD. " 13 CAT. No WAS 16/2501 " CLASS 58 DEL. " 14 CAT. No WAS 16/2509 " 15 ADDED.		2/10/59
J	NEW DRG. No ADDED ITEM 16 ADDED		2/10/59
K	ITEM 14 CLASS 31 ADDED.		2/10/59
L	ITEM 15 DEL.		2/10/59
M	ITEM 14 CLASS 87 & MK III ADD. " Q1 " 50 DEL.		2/10/59
N	ITEM 17 ADDED.		2/10/59
P	ITEM 11 MK III ADDED.		2/10/59
Q	ITEM 18 ADDED		2/10/59
R	ITEM 7 CLASS 142 ADDED.		2/10/59

FORMERLY BR DRG. No.
L-A3-5614

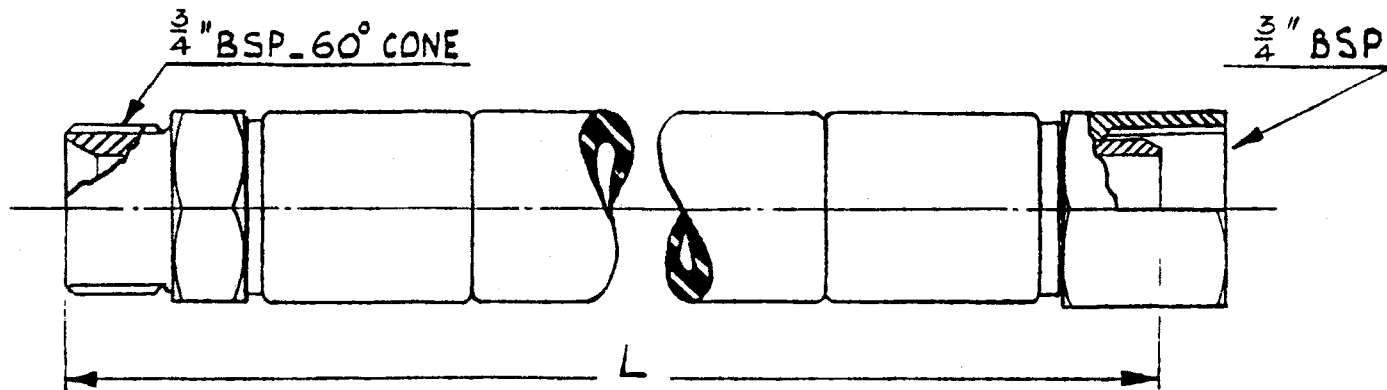
**TYPE P
RUBBER HOSE
19 m.m. BORE**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

Scale R S T

Drawing No M-A3-9002962 F G H J K
L M N P Q

Drawn Traced Checked Date



PARALLEL MALE - STRAIGHT FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DMAN'S INITIALS	DATE
A	ITEM 2 ADDED		9/79
B	NEW DRG No. ADDED		5/1/79
C	ITEM 01 DELETED		2/69

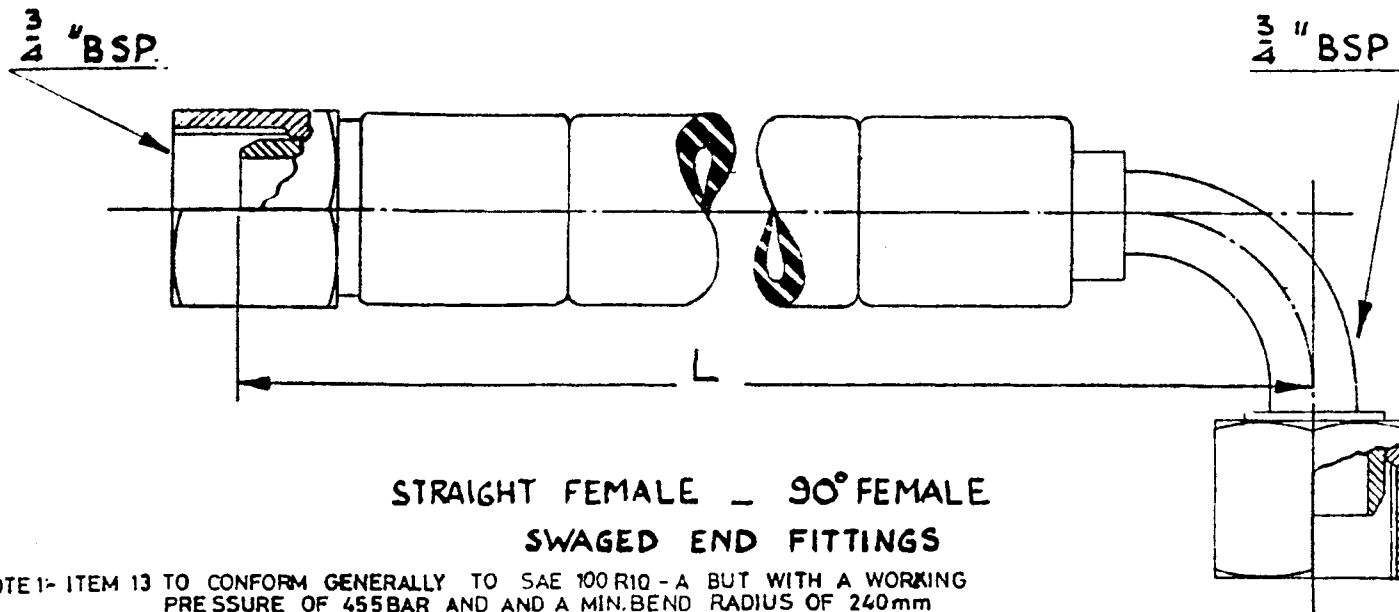
ITEM No	LENGTH L - m.m.	HOSE DATA				BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE ° C			REINFORCED BY
		SAE	BSS				
01							
02	300	100R1-A	3832-B1	80	-40 TO +93	1 WIRE BRAID	51/51008 31
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							

FORMERLY BR DRG No
L-A3-5599

TYPE P
RUBBER HOSE
19 m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale			
Drawing No.	M-A3-9002963		
Drawn	JRS	Traced	Checked
			Do.
			JAN 79



ISSUE LETTER	ALTERATION	D.M.A.N'S INITIALS	DATE
A	ITEM 7 ADDED.	R.A.	7/5
B	ITEM 4 CLASS 56 ADDED.	R.A.	7/7
C	ITEMS 8 & 9 ADDED.	R.A.	7/8
D	ITEMS 2 & 6 CLASS 254 ADD. - 3 & 5 WERE CLASS 47/9	R.A.	7/10
E	ITEM 10 ADDED.	R.A.	7/10
F	NEW DRG No ADDED. ITEM 11 ADDED.	R.A.	7/10
G	ITEM 06 CLASS 58 ADDED	R.A.	7/11
H	ITEM 01 DEL.	R.A.	7/11
J	ITEM 12 ADDED.	R.A.	7/12
K	ITEM 13, 15 ADDED - 06 CLASS 150 ADDED	R.	6/83
L	ITEM 16 & 17 ADDED " 11 CLASS 150 ADDED	R.	7/83
M	ITEM 10 LENGTH WAS 700	R.	7/83
N	ITEM 16 LENGTH WAS 1130	R.	7/83
P	ITEM 18 ADDED	R.	7/84
O	ITEM 02 WAS 465 LONG.	R.	7/84
R	ITEM 14 CLASS 142 ADDED	G.H.	6/85
S	ITEM 08 DELETED	R.B.	9/87

ITEM No.	LENGTH L. m.m.	HOSE SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY	BR. CAT. NUMBER	LOCOMOTIVE CLASS
		S.A.E.	B.S.S.					
01								
02	435	100R1-A	3832-B1	86	-40 TO +93	1 WIRE BRAID	72/1830	253,254,
03	610	-	-	-	-	-	61/41051	47/9.
04	510	-	-	-	-	-	61/41052	47/9.56.
05	560	-	-	-	-	-	61/41053	47/9.
06	735	-	-	-	-	-	72/1827	253,254,58,150
07	400	-	-	-	-	-	71/2558	56.
08								
09	580	-	-	-	-	-	61/41474	47/9.
10	540	-	-	-	-	-	72/4588	58.
11	1400	-	-	-	-	-	72/5519	58,150
12	320	-	-	-	-	-	15/80133	141.
13	770	-	-	455	-	4 SPIRAL HEAVY	15/78005	150.
14	1020	100R1-A	3832-B1	86	-	1 WIRE BRAID	15/78006	150,142
15	530	"	"	"	"	"	15/78007	150.
16	1160	100R10-A	4586-2	345	-	4 SPIRAL HEAVY	15/78078	150.
17	1050	-	-	-	-	-	15/78079	150.
18	900	-	-	-	-	-	-	RB005.

FORMERLY BR DRG No
L - A3-5623

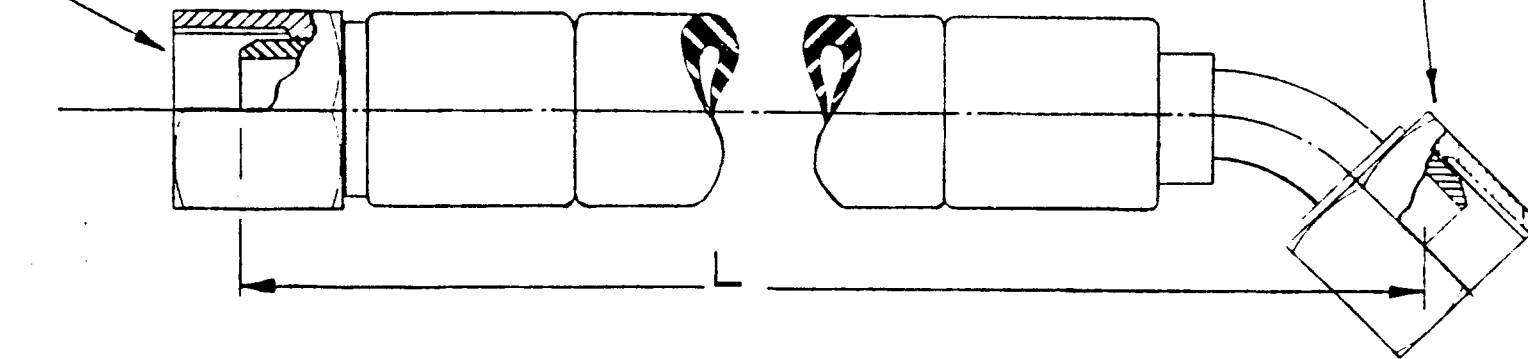
**TYPE P
RUBBER HOSE
19 m.m. BORE**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

Scale	R	S			
Drawing No	F	G	H	J	K
M-A3-9002964	L	M	N	P	Q
Drawn	Traced	Checked	Date		

4 1/2" BSP.

4 1/2" BSP.



**STRAIGHT FEMALE - 135° FEMALE
SWAGED END FITTINGS**

NOTE 1- ITEMS 07 & 08 TO CONFORM GENERALLY TO SAE 100 R10-A BUT WITH A WORKING PRESSURE OF 455 BAR AND A MIN. BEND RADIUS OF 240mm

ISSUE LETTER	ALTERATION	ISSUE INITIALS	DATE
A	ITEM 4 ADDED	S.S.	9/75
B	ITEM 5 ADDED	S.S.	11/76
C	ITEM 1, CLASS 210 ADDED	S.S.	11/77
D	ITEM 4, CLASS 254 ADDED ITEM 5 DELETED	S.S.	7/80
E	NEW DRG No ADDED	S.S.	1/81
F	ITEM 06 ADDED	S.S.	9/81
G	ITEM 06 CAT No WAS 72/5535 - 01 CLASS 50 DEL. - 02 & 03 DEL.	S.S.	7/81
H	ITEM 07 & 08 ADDED	R.A.	6/83
J	ITEM 09 ADDED	R.A.	8/83
K	ITEMS 10-12 ADDED	S.S.	7/83

ITEM No.	LENGTH L.m.m.	HOSE DATA				BR. CAT. NUMBER	VEHICLE / CLASS	
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE ° C			REINFORCED BY
S.A.E.	B.S.S.							
01	395	100R1-A	3832-B1	86	-40 to +93	1 WIRE BRAID	51/87007	210
02								
03								
04	735	"	"	"	"	"	72/1833	253, 254
05								
06	1175	100R1-A	3832-B1	86	-40 to +93	1 WIRE BRAID	72/5534	58,
07	800	—	—	455	" " "	4 SPIRAL HEAVY	15/78008	150
08	1550	—	—	"	" " "	" " "	15/78009	150
09	1350	100R1-A	3832-B1	86	-40 to +93	1 WIRE BRAID	15/78013	150
10	500	100R10-A	4586-2	345	- - -	4 SPIRAL HEAVY	—	RB005.
11	420	"	"	"	" " "	" " "	—	RB005.
12	600	"	"	"	" " "	" " "	—	RB005.
13								
14								
15								
16								
17								
18								

FORMERLY BR DRG No L-A3-5630

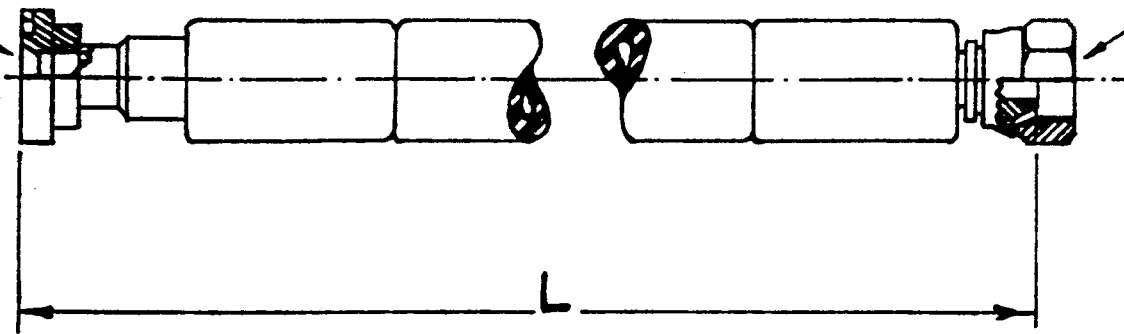
**TYPE P
RUBBER HOSE
19 m.m. BORE**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY**

Scale	—	A	B	C	D	E
Drawing No	M-A3-9002965	F	G	H	J	K
Drawn	Traced	Checked	Date			

SAE 'O'RING FLANGE
210 BAR (3000psi)

1/2" BSP



STRAIGHT SAE 'O'RING FLANGE - STRAIGHT FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DRAWN'S INITIALS	DATE
A	FIRST ISSUE	JRS	2/78
B	NEW DRG No ADDED	SB	1/80

ITEM No.	LENGTH L-mm	HOSE DATA				BR. CAT. NUMBER	VEHICLE / CLASS	
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C			REINFORCED BY
		SAE	BSS					
01	870	100R1-A	3832-B1	86	-40 TO +93	1 WIRE BRAID	98/3565	210
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								

FORMERLY BR DRG No
L-A3-11873

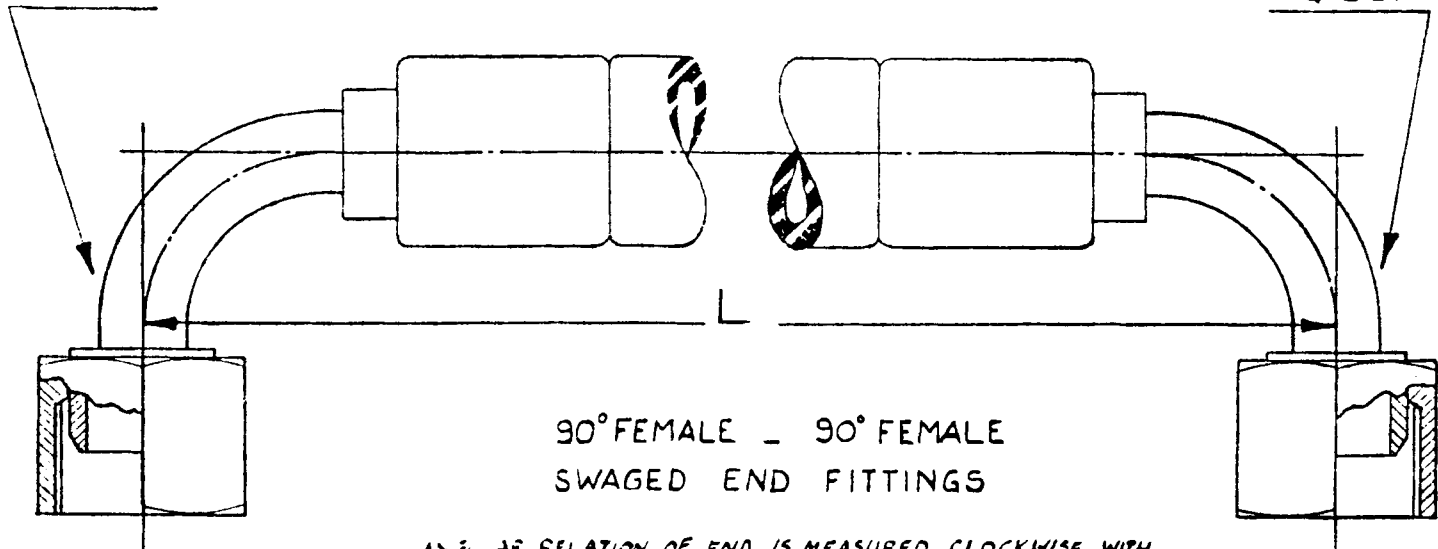
TYPE P
RUBBER HOSE
19 m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale	—	A	B		
Drawing No.	M-A3-9002966				
Drawn	JRS	Traced	—	Checked	—

3/4" BSP

3/4" BSP



90° FEMALE - 90° FEMALE
SWAGED END FITTINGS

ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH
THE COUPLING FURTHEST FROM THE EYE AT ZERO

ISSUE LETTER	ALTERATION	DATE
A	ITEM 7 ADDED.	1/24/74
B	ITEM 5 DEL. - 6 WAS CLASS 47/6	1/24/70
C	ITEM 8 ADDED	1/24/70
D	NEW DRG No ADDED ITEM 09&10 ADDED	1/24/70
E	ITEMS 01 & 04 DELETED	1/24/74
F	ITEM 11 ADDED	1/24/74
G	ITEM 12 ADDED	1/24/74
H	ITEM 13 & 14 ADDED	1/24/74
J	ITEM 15 ADDED	1/24/74
K	ITEM 07 DELETED	1/24/74
L	ITEM 16 ADDED	1/24/74

ITEM No.	LENGTH L.m.m.	HOSE DATA				ANGULAR RELATION	BR. CAT. NUMBER	VEHICLE/ CLASS
		SPECIFICATION S.A.E.	SPECIFICATION B.S.S.	WORKING PRESS. BAR	TEMPERATURE °C				REINFORCED BY
01								
02	585	100R1-A	3832-B1	86	-40 TO +93	1 WIRE BRAID	61/41077	47
03	585	100R2-A	3832-B2	155	" " "	2 " "	61/41078	47
04								
05								
06	700	100R1-A	3832-B1	86	" " "	1 " "	61/41080	47/9.
07								
08	1470	"	"	"	" " "	" " "	72/4592	58.
09	2560	"	"	"	" " "	" " "	72/5517	58.
10	1200	"	"	"	" " "	" " "	72/5518	58.
11	850	100R10-A	4586-2	345	" " "	4 SPIRAL HVY	---	RB005.
12	1800	"	"	"	" " "	" " "	15/78538	150/1
13	1150	100R1-A	3832-B1	86	" " "	1 WIRE BRAID	72/7461	56
14	900	"	"	"	" " "	" " "	72/7462	56
15	1610	100R1-A	3832-B1	"	" " "	" " "	15/82516	142
16	990	"	"	"	" " "	" " "	72/7555	56
17								
18								

FORMERLY BR DRG.No.
L - A3-5639

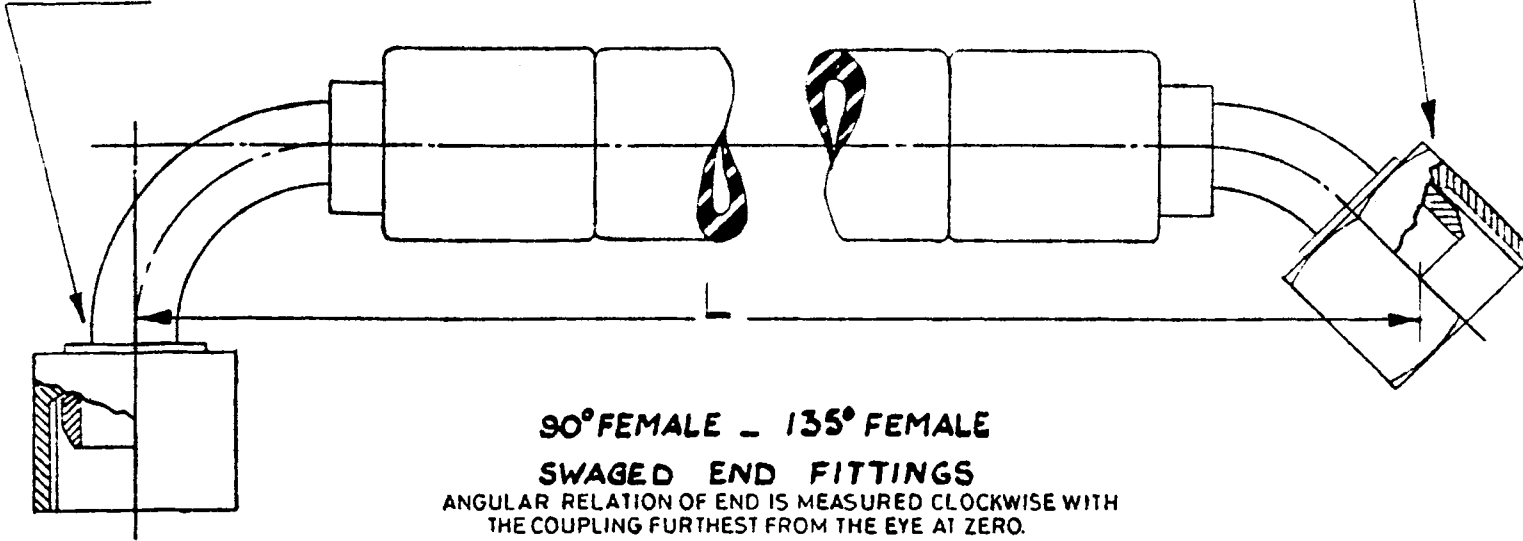
TYPE P
RUBBER HOSE
19.0m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	A	B	C	D	E
Drawing No	F	G	H	J	K
M - A3-9002967	L				
Drawn	Traced	Checked	Date		

3/4" BSP

3/4" BSP



ISSUE LETTER	ALTERATION	D MANS INITIALS	DATE
A	ITEM 4 ADDED.	R.S.	9/75
B	ITEM 5 ADDED.	R.S.	7/76
C	ITEM 5 ANGULAR RELATION WAS 90°	R.S.	1/77
D	ITEM 6 ADDED	R.S.	7/77
E	ITEM 7 ADDED. - 4 CLASS 254 ADDED	R.S.	7/80
F	ITEM 5 DEL.	R.S.	7/80
G	ITEM 8 ADDED.	R.S.	7/80
H	NEW DRG No ADDED. ITEM 09 ADDED.	R.S.	12/80
J	ITEM 01 DEL.	R.S.	10/81
K	ITEMS 02 & 03 DELETED	R.S.	11/81
L	ITEM 10 & 11 ADDED	R.S.	1/82
M	ITEM 12 ADDED	R.S.	1/82
N	ITEM 13 & 14 ADDED	R.S.	5/82
P	ITEM 06 DELETED	R.S.	9/82
R	ITEM 15 ADDED	R.S.	9/85

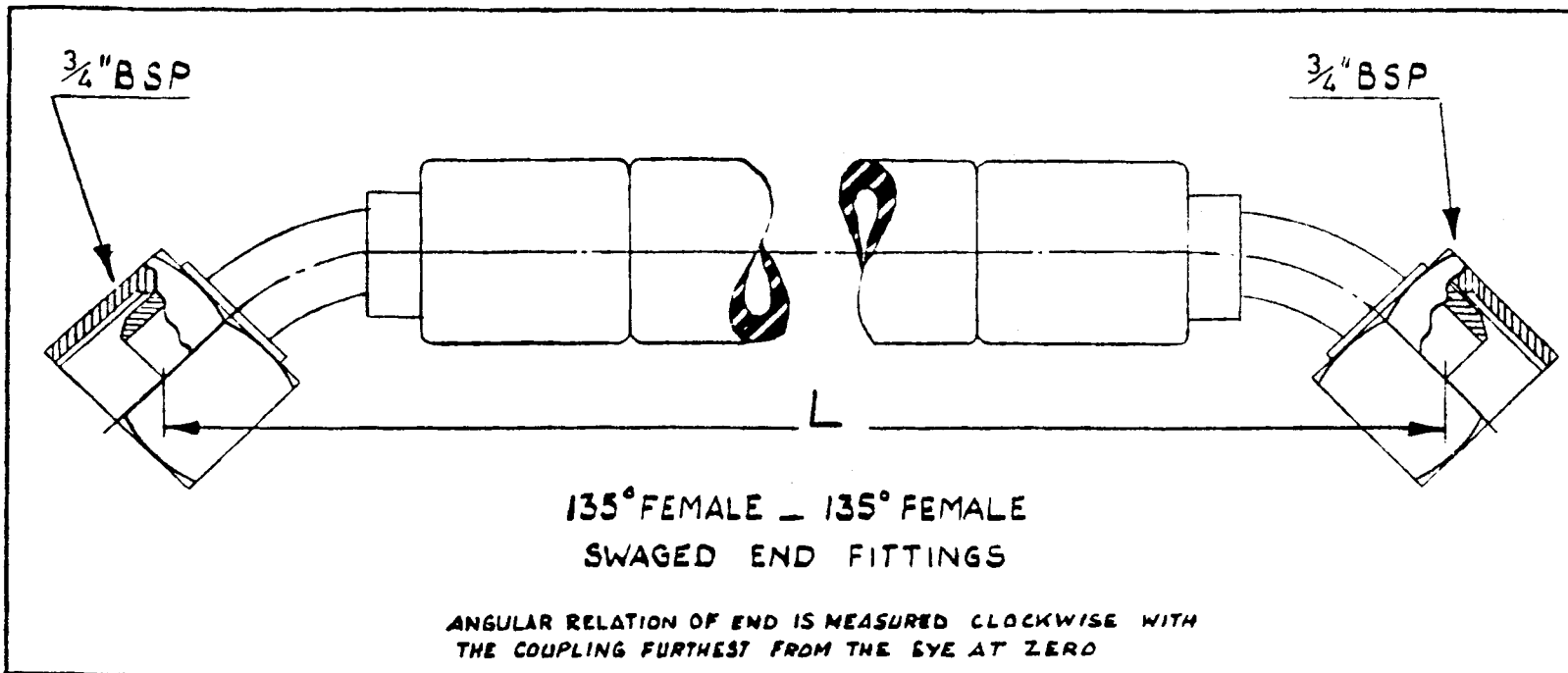
ITEM No.	LENGTH L.m.m.	HOSE DATA				ANGULAR RELATION	BR. CAT. NUMBER	VEHICLE/ CLASS
		SPECIFICATION S.A.E	B.S.S.	WORKING PRESS. BAR	TEMPERATURE °C				REINFORCED BY
01								
02								
03								
04	1145	100R1-A	3832-B1	86	-40 TO +93	1 WIRE BRAID	7211834	253.254.
05								
06								
07	690	-	-	-	-	-	7214550	56.
08	1550	-	-	-	-	-	7214593	58.
09	1110	-	-	-	-	-	7215520	58.
10	400	100R10A	4586-2	345	-	4 SPIRAL H VY		RB005.
11	450	-	-	-	-	-		RB005
12	400	100R2-A	3832-B2	155	" " "	2 WIRE BRAID		RB002 & 004.
13	600	100R1-A	3832 B1	86	" " "	1 WIRE BRAID	7217463	56
14	550	"	"	"	" " "	" " "	7217464	56
15	600	"	"	"	" " "	" " "	7217556	56
16								
17								
18								

FORMERLY BR DRG.No.
L-A3-5652

**TYPE P
RUBBER HOSE
19 m.m. BORE**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

Scale		A	B	C	D	E
Drawing No	M-A3-9002968	F	G	H	J	K
Drawn	Traced	L	M	N	P	R
Checked	Date					



ISSUE LETTER	ALTERATION	DWMAN'S INITIALS	DATE
A	ITEM WAS CLASS 47/6		
B	NEW DRG. No ADDED ITEM 02 & 03 ADDED		

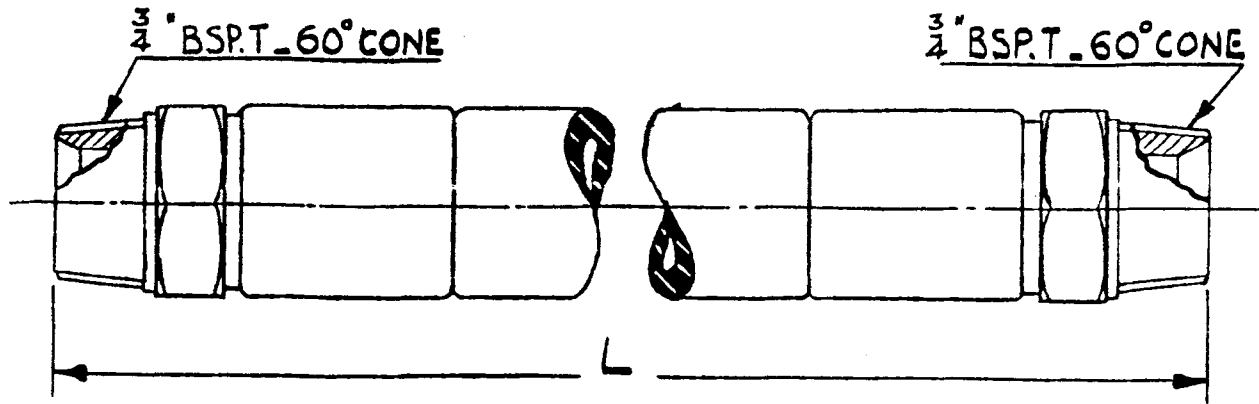
ITEM No.	LENGTH L.m.m.	HOSE DATA					ANGULAR RELATION	BR. CAT. NUMBER	VEHICLE / CLASS
		S.A.E	B.S.S.	WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY			
01	420	100R1-A	3832-B1	86	-40 to +93	WIRE BRAID	45°	61/41109	47/9.
02	1800	100R10-A	4586-2	345	- - -	SPIRAL HEAVY	0°	72/5516	58.
03	670	100R1-A	3832-B1	86	- - -	WIRE BRAID	154°	72/5521	58.

FORMERLY BR DRG.No.
L-A3-7809

TYPE P
RUBBER HOSE
 19.0m.m. BORE

**CHIEF MECHANICAL &
 ELECTRICAL ENGINEER**
BRITISH RAILWAYS BOARD
 STANDARDS & RATIONALIZATION
 DERBY

Scale	_____	A	B		
Drawing No	M-A3-9002969				
Drawn	Traced	Checked	Date		



TAPER MALE - TAPER MALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION		DRAWN'S INITIALS	DATE
	A	NEW DRG No ADDED			NSB/B

ITEM No	LENGTH L_m.m.	HOSE DATA				BR. CAT. NUMBER	VEHICLE / CLASS	
		SPECIFICATION		WORKING PRESS.BAR.	TEMPERATURE ° C			REINFORCED BY
		SAE	BSS					
01	305	100R1-A	3832-B1	86	-40 to +93	1 WIRE BRAID		
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								

FORMERLY BR DRG No
L-A3-5605

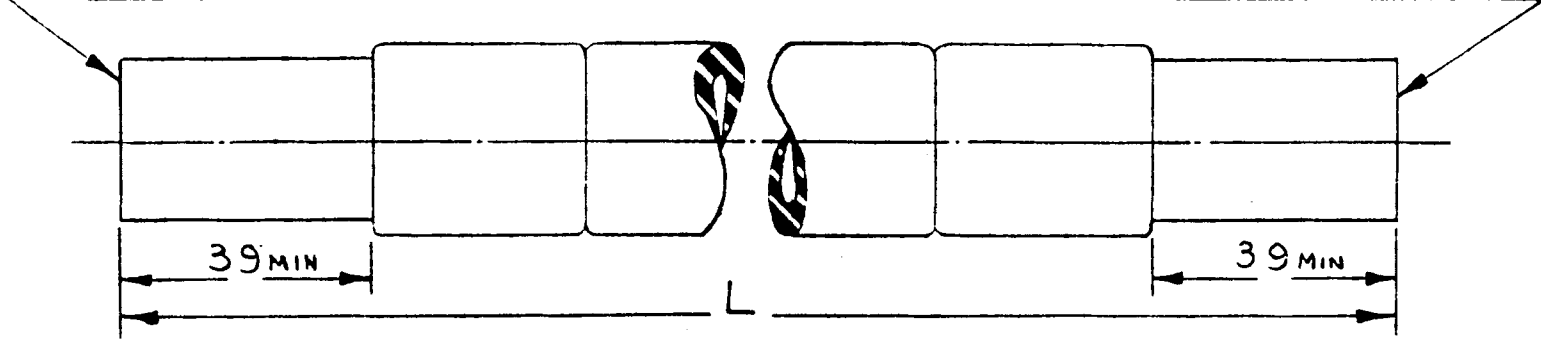
TYPE P
RUBBER HOSE
19 m.m BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale	—	A			
Drawing No	M-A3-9002970				
Drawn	Traced	Checked	Date		
JRS	—	—	20/1/68		

7"
8 O-DIAM. HEAVY DUTY.

7"
8 O-DIAM. HEAVY DUTY.



STANDPIPE - STANDPIPE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DATE
A	STANDPIPE LENGTH WAS 40	6/76
B	ITEM 2 ADDED	5/77
C	NEW DRG No ADDED	5/77

ITEM No.	LENGTH L-mm	HOSE DATA				BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	BSS	WORKING PRESS. BAR	TEMPERATURE °C			REINFORCED BY
01	610	100R1-A	3832-B1	86	-40 to +93	61/41097	27
02	320	"	"	"	"	14/2187	DMU
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							

FORMERLY BR DRG No L-A3-5660

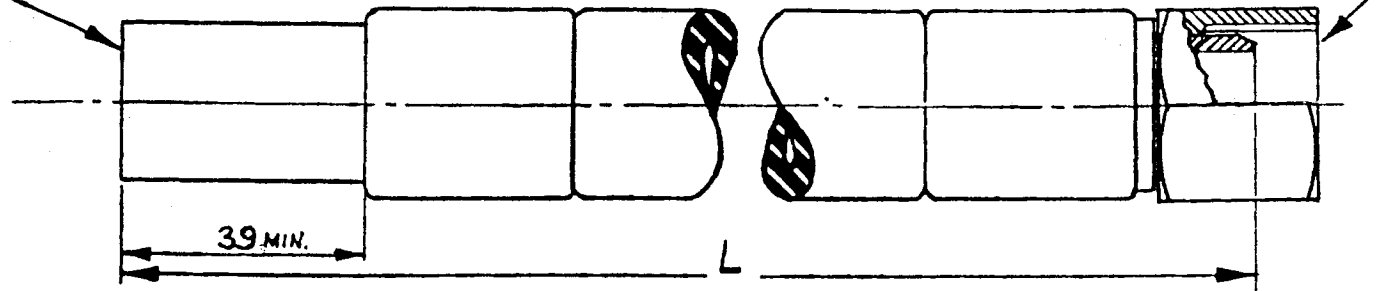
TYPE P
RUBBER HOSE
19 mm. BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale	—	A	B	C	
Drawing No	M-A3-9002971				
Drawn	JRS	Traced	—	Checked	—
Date	1/1/75				

7/8" O-DIAM. HEAVY DUTY.

3/4" BSP



STANDPIPE — STRAIGHT FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DMAR'S INITIALS	DATE
A	STANDPIPE LENGTH WAS 40	JRS	6/78
B	NEW DRG No ADDED.	JRS	1/79

ITEM No.	LENGTH L-mm	HOSE DATA				BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C			REINFORCED BY
		SAE	BSS				
01	300	100R1-A	3832-B1	86	-40 To +93	1 WIRE BRAID	
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							

FORMERLY BR DRG No L-A3-5634

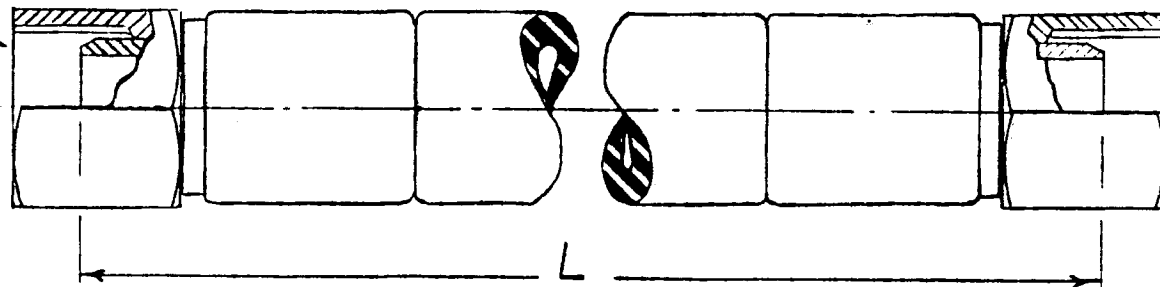
TYPE P
RUBBER HOSE
19 mm BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale	/	A	B		
Drawing No	M-A3-9002972				
Drawn	JRS	Trace		Checked	
Date					JAN 75

1" BSP

1" BSP



STRAIGHT FEMALE - STRAIGHT FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	D.M.A.S. INITIALS	DATE
A	ITEM 5 CLASS 253 ADDED.	P ₂	7/75
B	ITEM 5 & 6 CLASS 210 ADDED.	P ₂	7/77
C	ITEM 2 CAT. NO. WAS 17/60101 - 2 CLASS WAS 07 - 3 ADDED. - 5 CLASS 252 DEL. - 6 - 07	P ₂	5/80
D	ITEM 5 CLASS 254 ADDED. - 2 CAT. NO. WAS 16/2500 - 3 - - - 16/2508	P ₂	10/80
E	NEW DRG No ADDED ITEM 03 DEL. ITEM 06 CLASS 56 ADDED	P ₂	7/81
F	ITEM 01 DEL.	P ₂	7/81
G	ITEM 01 REINSTATED	P ₂	12/81
H	ITEM 08 DMU ADDED	P ₂	7/82
J	ITEM 01 MK III ADDED - 09 ADDED	P ₂	1/84
K	ITEM 10 & 11 ADDED	P ₂	8/85
L	ITEM 12 ADDED	P ₂	8/85
M	ITEM 13 ADDED	P ₂	8/85
N	ITEM 01 & 06 CLASS 56 DELETED	P ₂	11/85
P	ITEM 1 CAT. NO WAS 51/87002	P ₂	8/85

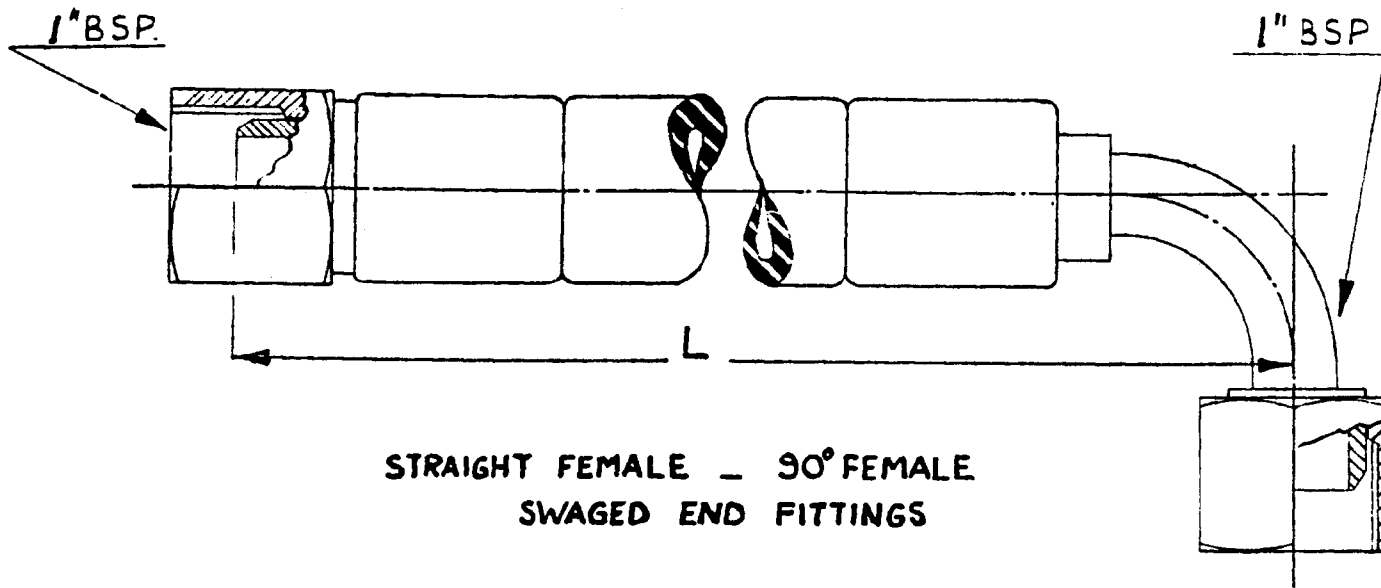
ITEM No	LENGTH L. m.m.	HOSE DATA				BR. CAT. NUMBER	VEHICLE / CLASS	
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C			REINFORCED BY
		SAE	BSS.					
01	325	100R1-A	3832-B1	69	-40 to +93	1 WIRE BRAID	51/87092	MK III.
02	370	100R1-A	3832-B1	69	-40 to +93	1 WIRE BRAID	17/60101	56.
03								
04								
05	555	.	.	.	.	.	72/1812	253, 254, 210.
06	585	.	.	.	.	.	17/60102	210.
07	660	.	.	.	.	.	61/41023	27.
08	740	.	.	.	.	.	61/41024	27, DMU.
09	385	.	.	.	.	.	63/8282	MK III
10	1050	.	.	.	.	.	15/78014	150
11	670	.	.	.	.	.	15/81576	141
12	400	100R10-A	4586-2	276	" - "	4 SPIRAL HEAVY		RB 002 & 004
13	1980	100R1-A	3832-B1	69	-40 to +93	1 WIRE BRAID	15/81953	142
14								
15								
16								
17								
18								

FORMERLY BR DRG. No.
L-A3-5615

TYPE P
RUBBER HOSE
25.4 m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	A	B	C	D	E
Drawing No	F	G	H	J	K
M-A3-9002973	L	M	N	P	
Drawn	Traced	Checked	Date		



STRAIGHT FEMALE - 90° FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DRMANS INITIALS	DATE
A	ITEM 8 ADDED.	A ₃	7/25
B	ITEM 9 ADDED.	A ₃	3/77
C	ITEM 2 SERVICE VEHICLE NUMBERS ADDED.	A ₃	9/76
D	ITEMS 3, 4, 5 & 8 DEL. - 6 & 7 CLASS WAS 4716 ITEM 9 CLASS 253 & 254 SHOWN. - 10 ADDED.	A ₃	7/80
E	NEW DRG. No ADDED. ITEM 11 ADDED.	A ₃	1/80
F	ITEM 12 ADDED.	A ₃	7/80
G	ITEM 11 DEL.	A ₃	7/81
H	ITEM 02 DEL.	A ₃	7/81
J	ITEM 10 LTH. WAS 1700 - 12 DEL.	A ₃	7/82
K	ITEM 04 REINSTATED	R ₂	8/83
L	ITEM 04 CAT NO WAS 83/1701	M ₇	7/85
M	ITEM 13 ADDED	R ₂	7/85
N	ITEM 14 & 15 ADDED	R ₂	7/85
P	ITEM 14 DELETED	R ₂	7/85
R	ITEMS 06 & 07 DELETED ITEM 14 REINSTATED	R ₂	8/85

ITEM No.	LENGTH L. m.m.	HOSE SPECIFICATION		WORKING PRESS. BAR	DATA TEMPERATURE °C	REINFORCED BY	BR. CAT. NUMBER	VEHICLE / CLASS
		S.A.E	B.S.S.					
01								
02								
03								
04	710	100 R1-A	3832-B1	69	-40 TO +93	1 WIRE BRAID	15/78010	150
05								
06								
07								
08								
09	525	-	-	-	-	-	72/2826	253, 254,
10	1500	-	-	-	-	-	72/4589	58,
11								
12								
13	320	100 R1-A	3832-B1	69	-40 to +93	1 WIRE BRAID	15/81954	142
14	1800	"	"	"	" " "	" " "	15/78536	150/1
15	2100	"	"	"	" " "	" " "	15/78537	150/1
16								
17								
18								

FORMERLY BR DRG.No.
L-A3-5624

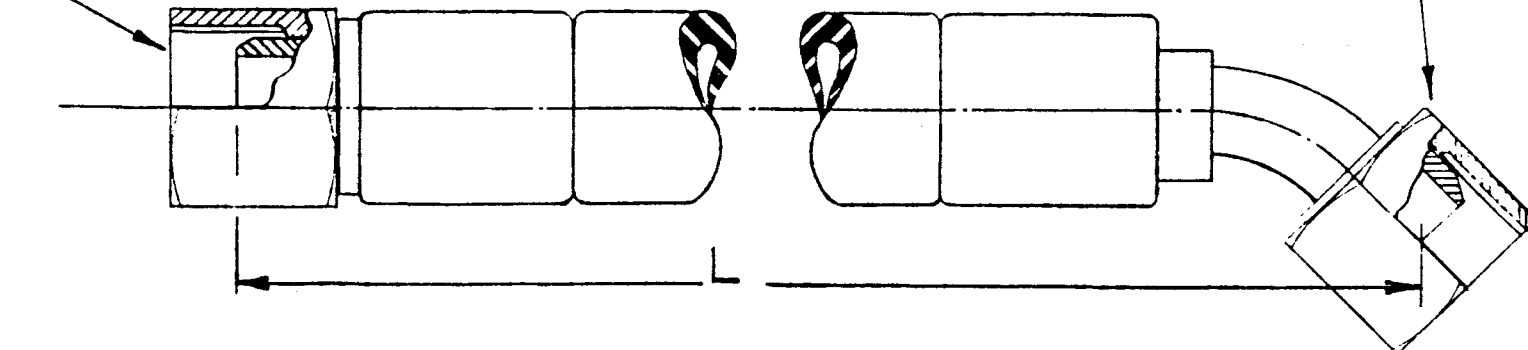
**TYPE P
RUBBER HOSE
25.4 m.m. BORE**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER.
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

Scale	A	B	C	D	E
Drawing No	F	G	H	J	K
M-A3-9002974	L	M	N	P	R
Drawn	Traced	Checked	Date		

1" BSP.

1" BSP.



STRAIGHT FEMALE - 135° FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	D.M.A.N.S. INITIALS	DATE
A	ITEM 6 ADDED.		1/10
B	ITEMS 2&4 DEL. ITEM 5 CLASS 254 ADDED.		1/10
C	NEW DRG No. ADDED. ITEM 07 ADDED		1/10
D	ITEM 08 ADDED		1/10
E	ITEM 01 & 03 DEL.		1/10
F	ITEM 08 DEL.		1/10
G	ITEM 09 ADDED		1/10
H	ITEMS 10 & 11 ADDED		1/10
J	ITEM 06 DELETED		1/10

ITEM No.	LENGTH L.m.m.	HOSE DATA				BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C			REINFORCED BY
S.A.E.	B.S.S.						
01							
02							
03							
04							
05	710	100R1-A	3832-B1	69	-40 TO +93	1 WIRE BRAID	
06							
07	1175	-	-	-	-	-	
08							
09	1350	"	"	"	" " "	" " "	
10	435	"	"	"	" " "	" " "	
11	675	"	"	"	" " "	" " "	
12							
13							
14							
15							
16							
17							
18							

FORMERLY BR DRG. No.
L-A3-5631

TYPE P
RUBBER HOSE
25.4 m.m. BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

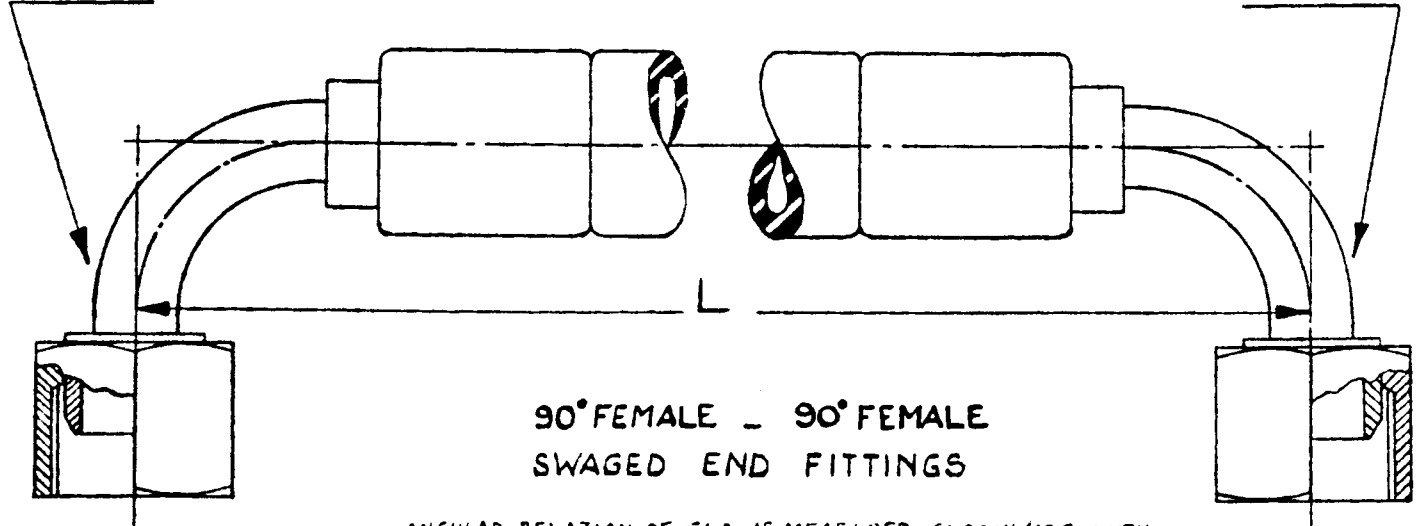
Scale	—	A	B	C	D	E
		F	G	H	J	

Drawing No
M-A3-9002975

Drawn Traced Checked Date
JRS

1" BSP

1" BSP



90° FEMALE - 90° FEMALE
SWAGED END FITTINGS

ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH
THE COUPLING FURTHEST FROM THE EYE AT ZERO

ISSUE LETTER	ALTERATION	D.M.'S INITIALS	DATE
A	ITEM 2 ADDED	JRS	1/76
B	ITEM 3 ADDED	JRS	6/76
C	ITEMS 4 + 5 ADDED	JRS	11/77
D	ITEM 6 ADDED ITEM 5 DELETED	JRS	3/78
E	ITEMS 1, 2 + 3 DEL.	JRS	7/80
F	NEW DRG No ADDED	JRS	1/81
G	ITEM 07 ADDED	JRS	9/80
H	ITEMS 04 & 06 DELETED	JRS	8/81

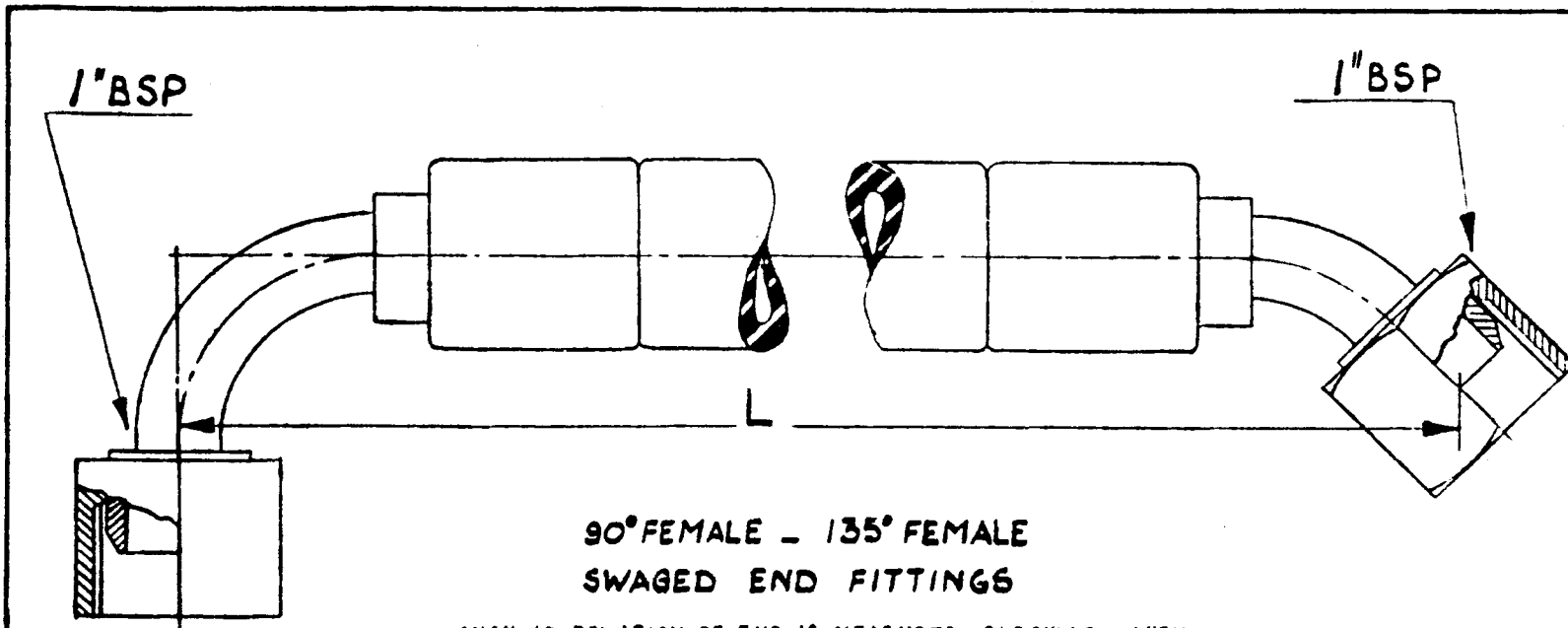
ITEM No.	LENGTH L.m.m.	HOSE DATA				ANGULAR RELATION	BR. CAT. NUMBER	VEHICLE/ CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C				REINFORCED BY
		S.A.E.	B.S.S.					
01								
02								
03								
04								
05								
06								
07	1100	100R1-A	3832-B1	69	-40 to +93	1 WIRE BRAID	15/78162	150/1
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								

FORMERLY BR DRG No
L-A3-5640

**TYPE P
RUBBER HOSE
25.4 m.m. BORE**

DIRECTOR OF MECHANICAL
& ELECTRICAL ENGINEERING
BRITISH RAILWAYS BOARD.
DESIGN SUPPORT GENERAL
DERBY.

Scale		A	B	C	D	E
Drawing No	M-A3-9002976	F	G	H		
Drawn	Traced	Checked	Date			



90° FEMALE - 135° FEMALE
SWAGED END FITTINGS

ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH
THE COUPLING FURTHEST FROM THE EYE AT ZERO.

ISSUE LETTER	ALTERATION	DRAWN INITIALS	DATE
A	ITEM 2 ADDED		2/5/76
B	ITEM 1 CLASS 201-07 ADDED		2/5/79
C	ITEM 1 & 2 DEL.		2/5/80
D	NEW DRG No ADDED. ITEM 03 ADDED		2/5/80
E	ITEM 04 ADDED		2/5/80
F	ITEM 04 DEL.		2/5/80
G	ITEM 05 ADDED		2/5/80
H	ITEM 06 ADDED		2/5/80
J	ITEM 07 ADDED		2/5/80

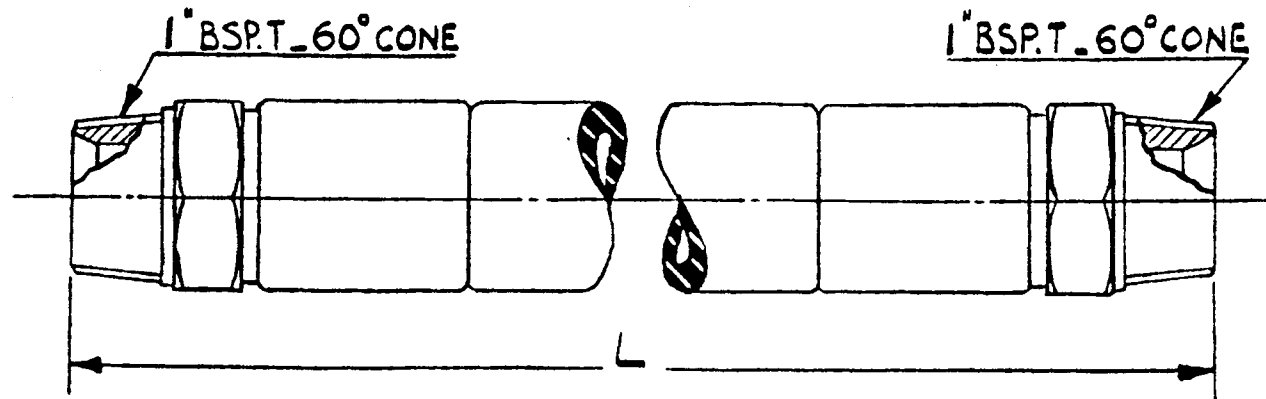
ITEM No.	LENGTH L.m.m.	HOSE DATA					ANGULAR RELATION	BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY			
		S.A.E	B.S.S.						
01									
02									
03	1600	100R10-A	4586-2	276	-40 TO +93	4 SPIRAL HEAVY	270°	72/5510 58.	
04									
05	1100	100R2-A	3832-B2	132	-40 TO +93	2 WIRE BRAID	270°	RB005.	
06	400	100R10-A	4586-2	276	-40 TO +93	4 SPIRAL HEAVY	0°	RB002 & 004.	
07	1800	100R1-A	3832-B1	69	" " "	1 WIRE BRAID	270°	15/78604 150/1	
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									

FORMERLY BR DRG.No.
L-A3-9123

TYPE P
RUBBER HOSE
25.4 m.m. BORE

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER**
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	—	A	B	C	D	E
Drawing No	M-A3-9002977	F	G	H	J	
Drawn	JRS	Traced	Checked	Date		



TAPER MALE - TAPER MALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DMAN'S INITIALS	DATE
A	ITEM 3 ADDED	R.S.	8/76
B	NEW DRG No ADDED	S.P.	1/81

ITEM No	LENGTH L_m.m.	HOSE DATA					BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS.BAR.	TEMPERATURE °C	REINFORCED BY		
		SAE	BSS					
01	235	100R1-A	3832-B1	69	-40 TO +93	1 WIRE BRAID	61/41005	47
02	305	"	"	"	"	"	61/41006	47
03	460	"	"	"	"	"	61/41000	47
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								

FORMERLY BR DRG No
L-A3-5606

TYPE P
RUBBER HOSE
25.4 m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale A B

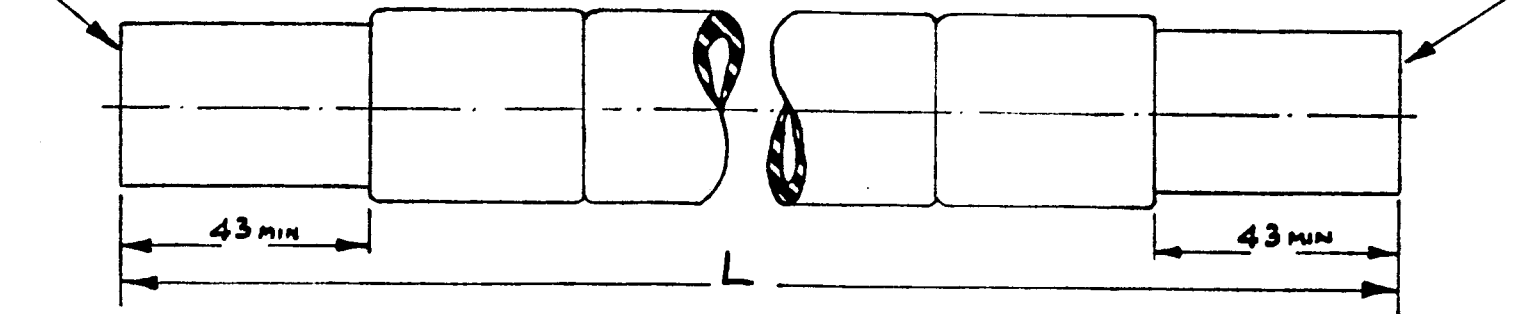
Drawing No
M-A3-9002980

Drawn Traced Checked Date

JRS — — — 1/77

1" O-DIAM. HEAVY DUTY

1" O-DIAM. HEAVY DUTY



STANDPIPE - STANDPIPE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	U.M.A.N.'S INITIALS	DATE
A	NEW DRG No ADDED	SBH/81	
B	ITEM 03 ADDED.	WJ/83	

ITEM No.	LENGTH L - mm	HOSE DATA				B.R. CAT. NUMBER	VEHICLE / CLASS	
		SPECIFICATION SAE	BSS	WORKING PRESS. BAR	TEMPERATURE °C			REINFORCED BY
01	419	100R1-A	3832-B1	69	-40 TO +93	1 WIRE BRAID	14/53149	DMU
02	610	"	"	"	"	"	14/91940	DMU
03	470	-	-	-	-	"	14(273)	DMU
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								

FORMERLY BR DRG No
L-A3-11100

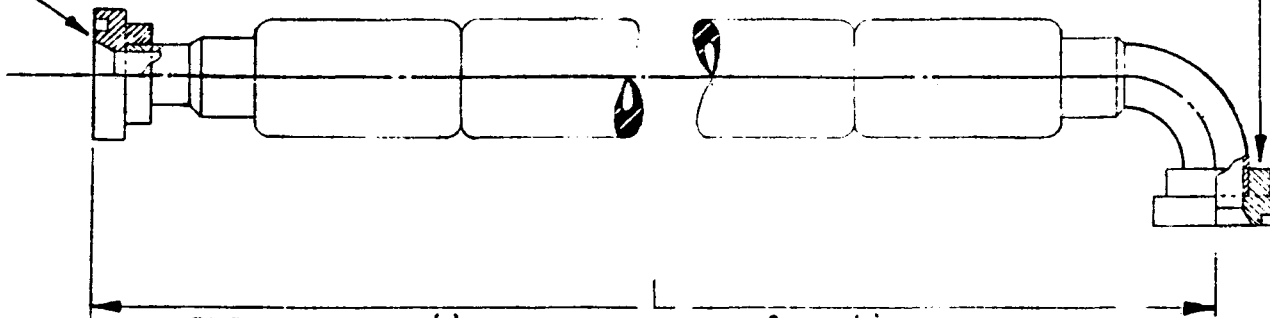
TYPE P
RUBBER HOSE
25.4 m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	—	A	B		
Drawing No	M-A3-9002981				
Drawn	JRS	Traced	—	Checked	—
Date	"/77				

FLANGE TO SAE J518c
HIGH PRESSURE SERIES

FLANGE TO SAE J518c
HIGH PRESSURE SERIES



STRAIGHT SAE ORING FLANGE - 90° SAE ORING FLANGE
SWAGED END FITTINGS

NOTE :- ITEM 01 TO CONFORM GENERALLY TO SAE 100 R10-A BUT WITH A WORKING PRESSURE OF 415 BAR AND A MIN BEND RADIUS OF 305 mm.

ISSUE LETTER	ALTERATION		DRAWN INITIALS	DATE
	A	NOTE ADDED RE HOSE SPEC.			1/4	7/81

ITEM No.	LENGTH Lmm	HOSE DATA				REINFORCED BY	HOSE ASSY WORKING PRESSURE	BR CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	BSS	WORKING PRESS BAR	TEMP °C				
01	1400	—	—	415	-40 to +93	SPiral HEAVY	260 BAR	72/552358.	

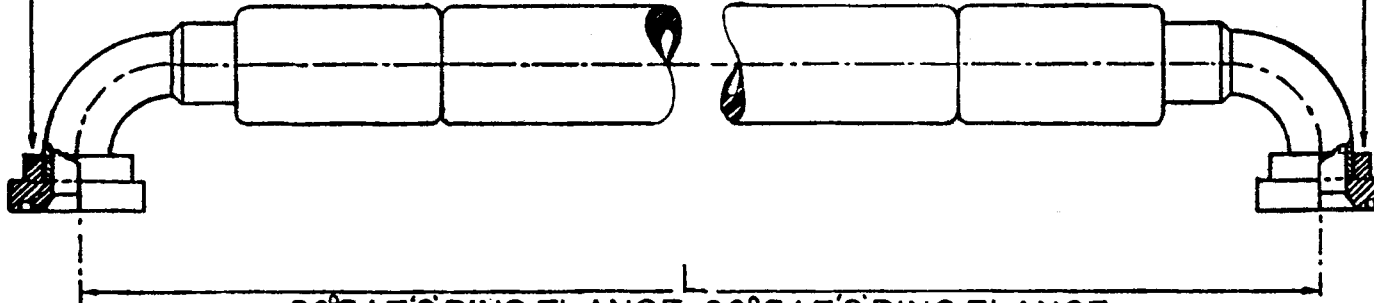
TYPE 'P'
RUBBER HOSE
25.4mm BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	—	A			
Drawing No	M-A3-9002985				
Drawn	Traced	Checked	Date		
PSG	—		2/1	1/81	

FLANGE TO SAE J518c
HIGH PRESSURE SERIES

FLANGE TO SAE J518c
HIGH PRESSURE SERIES



90°SAE O'RING FLANGE - 90°SAE O'RING FLANGE
SWAGED END FITTINGS

ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH
THE COUPLING FURTHEST FROM THE EYE AT ZERO.

NOTE :- ITEM 01 TO CONFORM GENERALLY TO SAE 100R10-A BUT WITH A WORKING
PRESSURE OF 415 BAR AND A MIN BEND RADIUS OF 305mm.

ISSUE LETTER	ALTERATION		ISSUE INITIALS	DATE
	A	NOTE ADDED RE HOSE SPEC			W/P	D

ITEM No.	LENGTH Lmm	HOSE DATA				ANGULAR RELATION	HOSE ASSY. WORKING PRESSURE	BR CAT. NUMBER	VEHICLE / CLASS	
		SPECIFICATION SAE	BSS	WORKING PRESSURE BAR	TEMP °C					REINFORCED BY
01	1400	—	—	415	-40 TO +93	4	SPIRAL HEAVY	0°	260 BAR	72/5524 58.

TYPE P
RUBBER HOSE
25.4mm BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

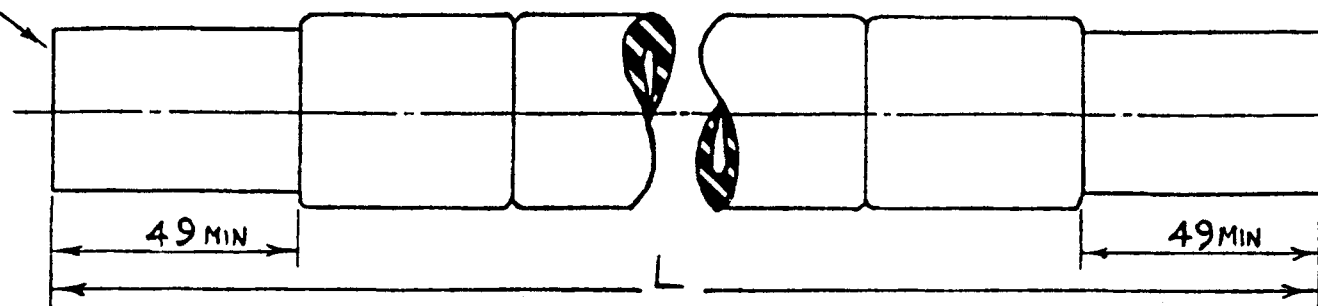
Scale ——— A

Drawing No
M-A3-9002989

Drawn / Traced / Checked / Date
PSG | — | A | 1/81

1 1/4" O-DIAM. HEAVY DUTY.

1 1/4" O-DIAM. HEAVY DUTY.



STANDPIPE - STANDPIPE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DRAWN'S INITIALS	DATE
A	STANDPIPE LENGTH WAS 46.	JRS	6/76
B	NEW DRG No ADDED	SB	1/81
C	ITEM 01 CLASS 24 DEL.	JRS	1/81

ITEM No.	LENGTH L-mm	HOSE DATA				BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	SPECIFICATION BSS	WORKING PRESS. BAR	TEMPERATURE °C			REINFORCED BY
01	445	100R1-A	3832-B1	69	-40 to +93	1 WIRE BRAID	25-27,33,
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							

FORMERLY BR DRG No L-A3-5662

TYPE P
RUBBER HOSE
25.4 m.m. BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

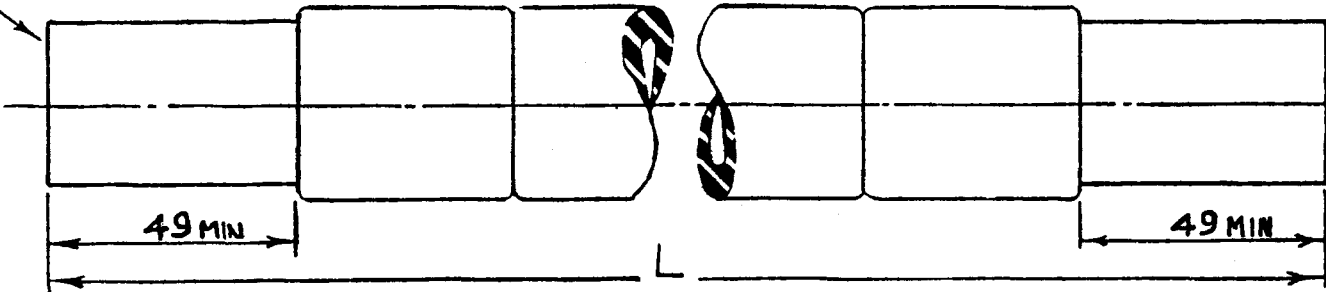
Scale A B C

Drawing No
M-A3-9002991

Drawn Traced Checked Date
JRS JAN 75

1 1/32" O-DIAM. HEAVY DUTY.

1 1/32" O-DIAM. HEAVY DUTY.



STANDPIPE - STANDPIPE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	MAN'S INITIALS	DATE
A	STANDPIPE LENGTH WAS 48.	JRS	6/76
B	NEW DRG No ADDED	SB	1/81
C	ITEM CLASS 24 DEL		

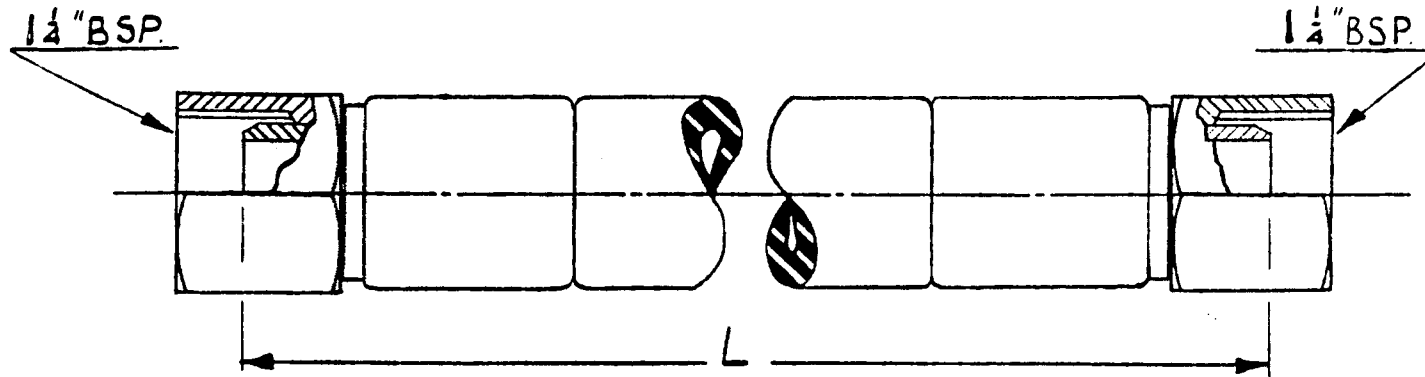
ITEM No.	LENGTH L - mm	HOSE DATA				BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	SPECIFICATION BSS	WORKING PRESS-BAR	TEMPERATURE °C			REINFORCED BY
01	410	100R1-A	3832-B1	69	-40 to +93	1 WIRE BRAID	61/41099 25,26,27
02	460	100R2-A	3832-B2	132	-40 to +93	2 WIRE BRAID	61/41100 33
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							

FORMERLY BR DRG No L-A3-5663

TYPE P
RUBBER HOSE
25.4 mm. BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	—	A	B	C	
Drawing No	M-A3-9002992				
Drawn	JRS	Traced	Checked	Date	JAN 75



STRAIGHT FEMALE - STRAIGHT FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	D MAN'S INITIALS	DATE
A	ITEMS 14,15,16,17 ADDED.	R ₅	7/78
B	ITEM 6 LTH. WAS 535.	R ₅	7/78
C	ITEM 18 ADDED.	R ₅	7/78
	FOR SUBSEQUENT ADDITION SEE SHEET 2	R ₅	7/78
D	ITEM 3 LTH. WAS 510.	R ₅	7/78
E	ITEM 3 CLASS 252 DEL. - 2.3.13, CLASS 254 ADDED - 5.7.9.15, DEL.	R ₅	7/80
F	ITEM 16 CAT No WAS 71/2393 - 17 - - - 71/2392	R ₅	7/80
G	ITEM 13 DEL. FOR FUTURE USE 03/M-A3-900192B. - 16 CAT. No WAS 16/2505 - 17 - - - 16/2504 CLASS 58 ADDED. - 8.8.11 CLASS 24 DEL.	R ₅	7/80
H	NEW DRG No ADDED	R ₅	7/80
J	ITEM 10 CLASS 44 DEL.	R ₅	7/80
K	ITEM 03 LENGTH WAS 490	R ₅	7/80
L	ITEM 18 DELETED	R ₅	7/80

ITEM No	LENGTH L.m.m.	HOSE DATA				BR. CAT. NUMBER	VEHICLE/ CLASS
		SPECIFICATION SAE	BSS	WORKING PRESS. BAR	TEMPERATURE °C			REINFORCED BY
01	370	100R1-A	3832-B1	43	-40 TO +93	1 WIRE BRAID	4546.
02	400	"	"	"	"	"	253.254.
03	457	"	"	"	"	"	253.254.
04	555	"	"	"	"	"	46.
05							
06	560	100R9-A	4586-1	172	- - -	4 SPIRAL LIGHT	47.
07							
08	1030	100R1-A	3832-B1	43	- - -	1 WIRE BRAID	25.
09							
10	1050	"	"	"	"	"	4546.
11	1370	"	"	"	"	"	25.
12	2590	100R9-A	4586-1	172	- - -	4 SPIRAL LIGHT	46.
13							
14	200	100R1-A	3832-B1	43	- - -	1 WIRE BRAID	56.
15							
16	350	"	"	"	"	"	56.
17	450	"	"	"	"	"	56.58.
18							

FORMERLY BR DRG No.
L-A3-5616 SHT.1

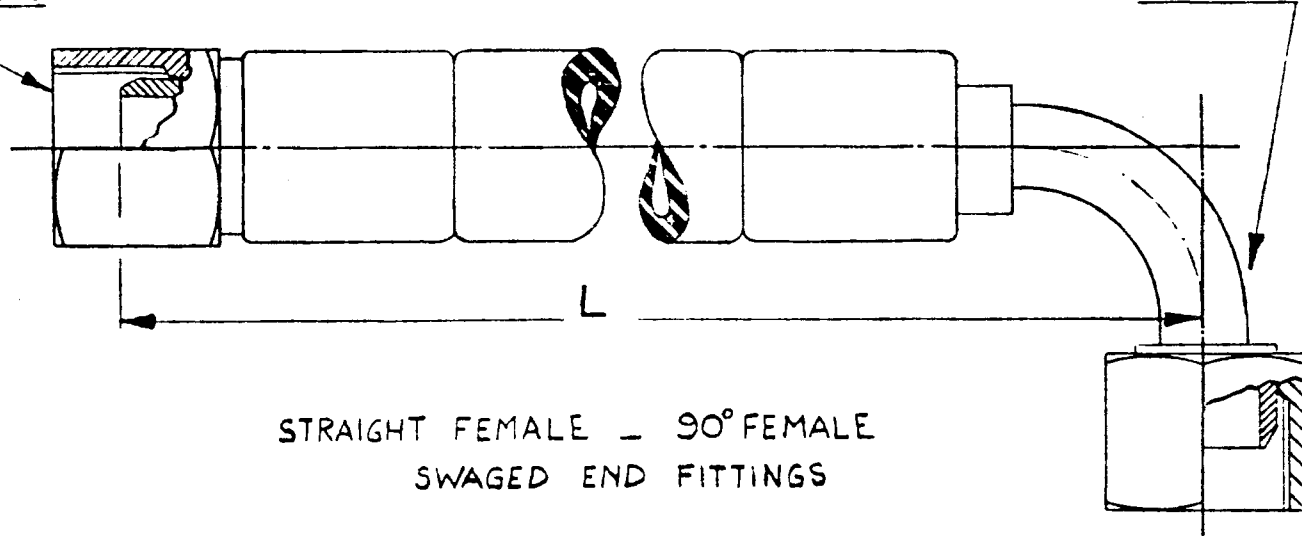
TYPE P
RUBBER HOSE
31.8 mm BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	A	B	C	D	E
Drawing No	F	G	H	J	K
M-A3-9002993	L				
Drawn/Traced	Checked	Date			
RS					

1/4" BSP.

1/2" BSP



STRAIGHT FEMALE - 90° FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	ISSUE INITIALS	DATE
A	ITEM 10 ADDED.	P.S.	5/77
B	ITEM 2, 3 & 8 DEL. - 4 & 9 CLASS WAS 47/6, - 11 ADDED	P.S.	1/80
C	ITEM 2 REINSTATED.	P.S.	1/80
D	NEW DRG No. ADDED	P.S.	1/80
E	ITEM 12 ADDED - 02 CLASS 150 ADDED	P.S.	1/77
F	ITEM 12 LENGTH WAS 1950	P.S.	1/85
G	ITEMS 13 & 14 ADDED	P.S.	1/85

ITEM No.	LENGTH L - m.m.	HOSE SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY	BR. CAT. NUMBER	VEHICLE/ CLASS
		S.A.E	B.S.S.					
01	520	100R1-A	3832-B1	43	-40 TO +93	1 WIRE BRAID	61/41054	46.
02	610	"	"	"	"	"	61/41055	47, 150
03								
04	840	-	-	-	-	-	61/41056	47/47/9.
05	425	100R10-A	4586-2	207	-	4 SPIRAL HEAVY	61/41111	47.
06	1065	100R9-A	4586-1	172	-	4 SPIRAL LIGHT	61/41057	46.
07	2335	100R1-A	3832-B1	43	-	1 WIRE BRAID	61/41058	46.
08								
09	800	100R9-A	4586-1	172	-	4 SPIRAL LIGHT	61/41060	47/9.
10	800	100R10-A	4586-2	207	-	4 SPIRAL HEAVY	72/2742	56.
11	560	100R1-A	3832-B1	43	-	1 WIRE BRAID	61/41784	47.
12	2060	"	"	"	"	"	15/78075	150
13	660	"	"	"	"	"	EXPERIMENT	58
14	590	"	"	"	"	"	EXPERIMENT	58
15								
16								
17								
18								

FORMERLY BR DRG No.
L-A3-5625

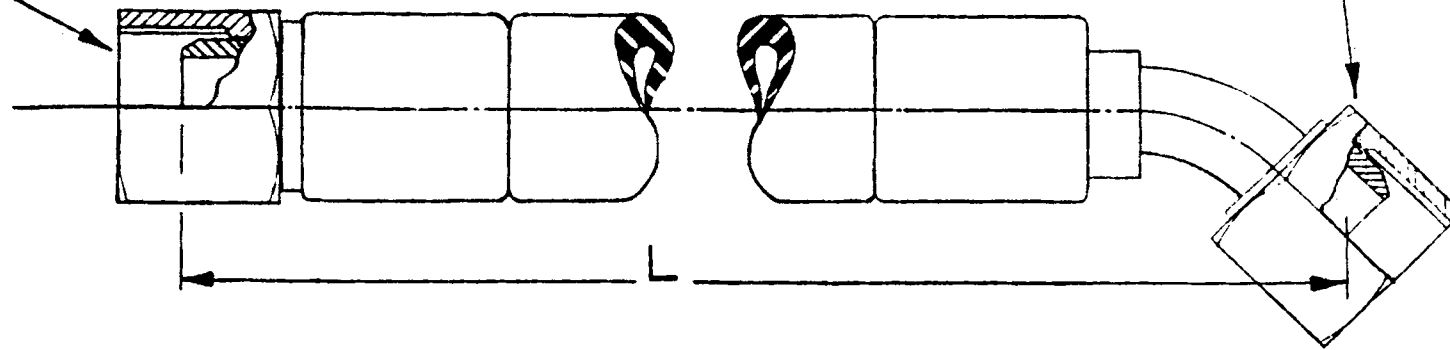
TYPE P
RUBBER HOSE
31.8m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	A	B	C	D	E
Drawing No M-A3-9002994	F	G			
Drawn	Traced	Checked			

1/2" BSP.

1/2" BSP.



STRAIGHT FEMALE - 135° FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DMANS INITIALS	DATE
A	ITEM 3 ADDED.		1/11
B	ITEM 4 ADDED		1/16
C	NEW DRG.No ADDED ITEM 03 WAS 600 LONG		1/16
D	ITEM 04 WAS 700 LONG		1/16
E	ITEM 03 DELETED		1/16

ITEM No.	LENGTH L.m.m.	HOSE DATA				BR. CAT. NUMBER	VEHICLE/ CLASS
		SPECIFICATION		WORKING PRESS.BAR	TEMPERATURE ° C			REINFORCED BY
		B.A.E.	B.S.S.				
01							
02	790	100R1-A	3832-B1	43	-40 to +93	1 WIRE BRAID	
03							
04	600	-	-	-	-	-	
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							

FORMERLY BR DRG.No.
L-A3-5632

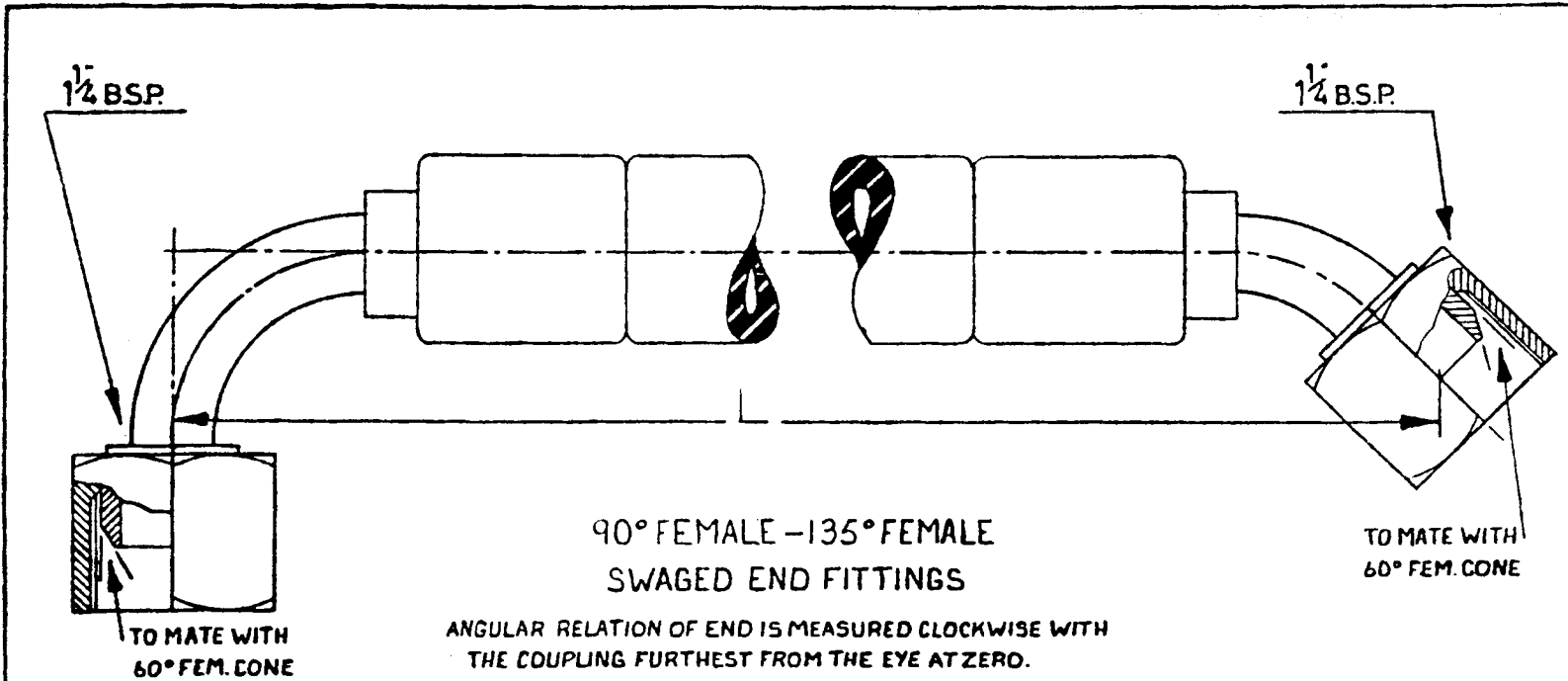
TYPE P
RUBBER HOSE
31.8 m.m. BORE

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER**
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale **A B C D E**

Drawing No
M-A3-9002995

Drawn Traced Checked Date



ISSUE LETTER	ALTERATION	DATE
A	NEW DRG No ADDED. ITEMS 02 & 03 ADDED.	
B	ITEMS 02 & 03 DEL.	

ITEM No.	LENGTH L.m.m.	HOSE DATA					ANGULAR RELATION	B.R. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS-BAR	TEMPERATURE °C	REINFORCED BY			
		S.A.E.	B.S.S.						
01	670	100R1-A	3832-B1	43	-40 to +93	WIRE BRAID	180°	721458258.	
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									

FORMERLY BR DRG No
G-A3-1100

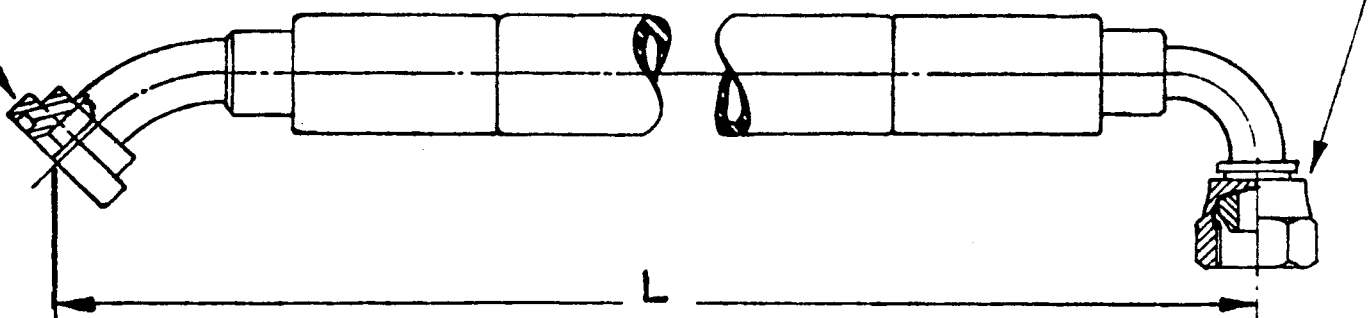
TYPE 'P' RUBBER HOSE
31.8mm BORE
WITH SWAGED FITTINGS

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	A	B		
Drawing No				
M-A3-9002997				
Drawn/Traced/Checked/Date				
P.S.G.				7/80

SAE O'RING FLANGE
210 BAR (3000 psi)

1/4" BSP



135° SAE O'RING FLANGE - 90° FEMALE
SWAGED END FITTINGS
ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH
THE COUPLING FURTHEST FROM THE EYE AT ZERO

ISSUE LETTER	ALTERATION	D. MARKS INITIALS	DATE
A	FIRST ISSUE	SAW	9/78
B	NEW DRG No ADDED	SAW	9/78
C	ITEM 01 DELETED	SAW	9/78

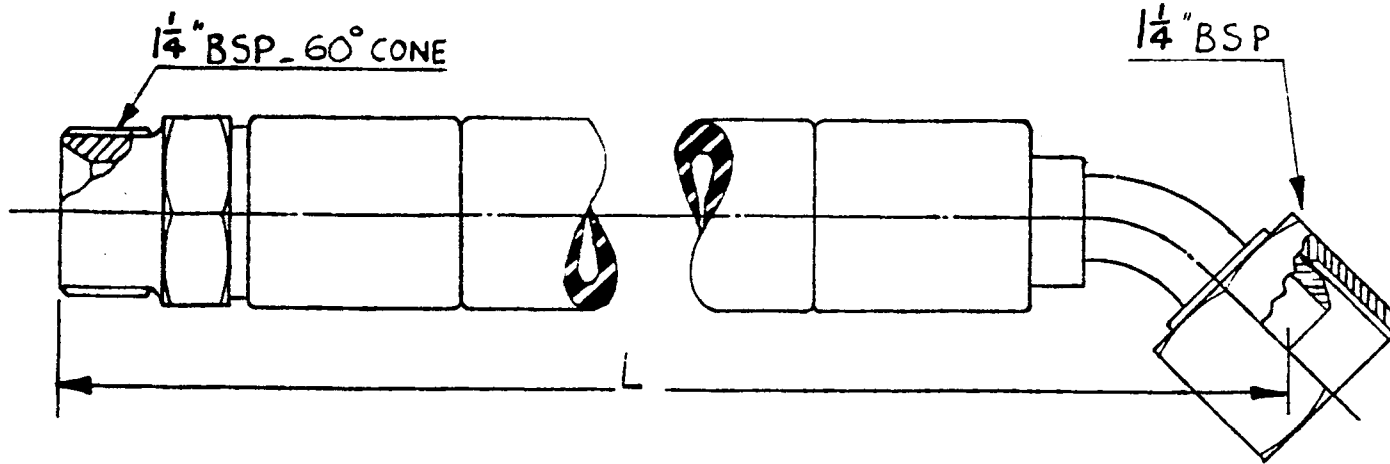
ITEM No.	LENGTH L - mm	HOSE DATA				ANGULAR RELATION	BR CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	BSS	WORKING PRESS. BAR	TEMPERATURE °C				REINFORCED BY
01								
02	910	100R1-A	3832-B1	43	-40 TO +93	1 WIRE BRAID	98/3569	210
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								

FORMERLY BR DRG No
L-A3-11875

TYPE P
RUBBER HOSE
31.8 m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale	—	A	B	C		
Drawing No	M-A3-9002998					
Drawn	JRS	Traced	-	Checked	-	Date
						9/78



PARALLEL MALE - 135° FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DRAWN INITIALS	DATE
	A NEW DRG No ADDED			3/75

ITEM No.	LENGTH L - m.m.	HOSE DATA				BR. CAT. NUMBER	VEHICLE/ CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE ° C		
		SAE	BSS				
01	350	100R10-A4586-2		207	-40 to +93	61/41110	47
02							
03							
04							
05							
06							
07							
08							
09							
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13							
14							
15							
16							
17							
18							

FORMERLY BR DRG No
L-A3-7808

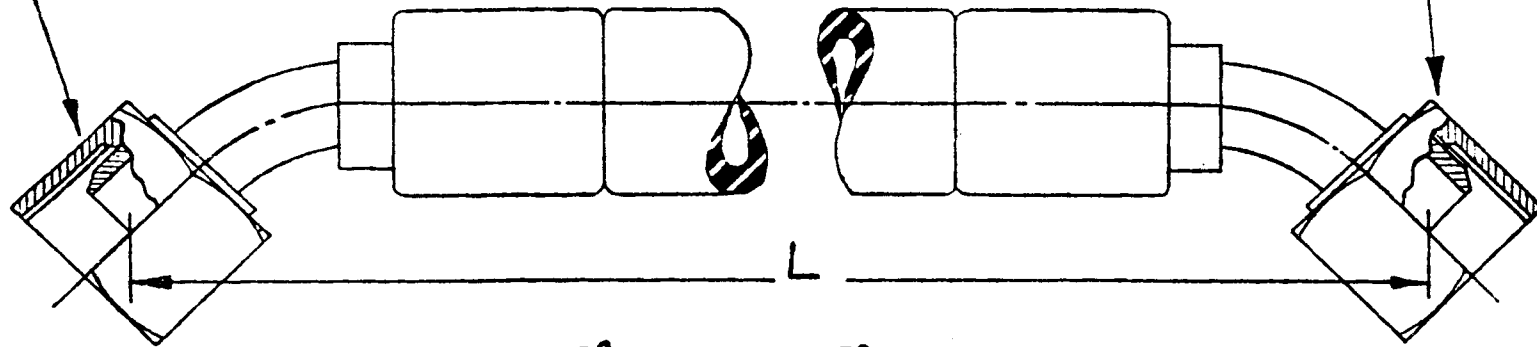
TYPE P
RUBBER HOSE
31.8 mm BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS+RATIONALIZATION
DERBY

Scale	—	A		
Drawing No	M-A3-9002999			
Drawn	Traced	Checked	Date	
JRS	—	—	3/75	

1/2" BSP

1/2" BSP



135° FEMALE - 135° FEMALE
SWAGED END FITTINGS

ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH
THE COUPLING FURTHEST FROM THE EYE AT ZERO

ISSUE LETTER	ALTERATION	DRAWN'S INITIALS	DATE
A	ITEM 2 ADDED	JRS	1/27
B	NEW DRG No ADDED	JRS	1/27
C	ITEM 02 DELETED	JRS	1/27

ITEM No.	LENGTH L-m.m.	HOSE DATA				ANGULAR RELATION	BR. CAT. NUMBER	VEHICLE/ CLASS
		SPECIFICATION S.A.E. B.S.G.	WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY			
01	610	100R9-A4586-1	172	-40 to +93	4 SPIRAL LIGHT	45°	61/41090	47
02								
03								
04								
05								
06								
07								
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14								
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16								
17								
18								

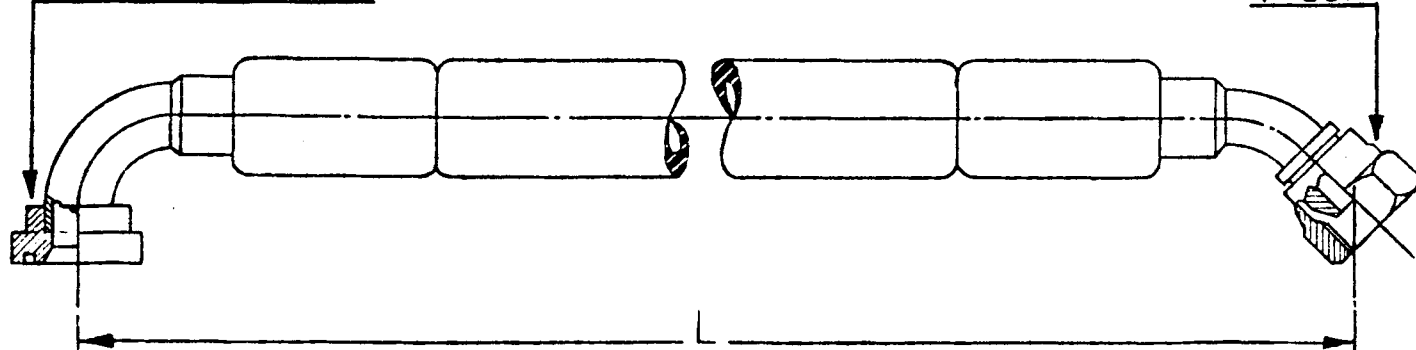
FORMERLY BR DRG No
L-A3-5647

TYPE P
RUBBER HOSE
31.8 m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	—	A	B	C
Drawing No	M-A3-9005000			
Drawn	JRS	Traced	Checked	Date
				JAN 75

FLANGE TO SAE J518c
HIGH PRESSURE SERIES



90° SAE O'RING FLANGE - 135° FEMALE
SWAGED END FITTINGS

ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH
THE COUPLING FURTHEST FROM THE EYE AT ZERO.

NOTE :- ITEM 01 TO CONFORM GENERALLY TO SAE 100 R10-A BUT WITH A WORKING
PRESSURE OF 400 BAR AND A MIN BEND RADIUS OF 420 mm.

ITEM No	LENGTH Lmm	HOSE DATA				ANGULAR RELATION	HOSE ASSY WORKING PRESSURE	BR CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	SPECIFICATION BSS	WORKING PRESSURE BAR	TEMP. °C					REINFORCED BY
01	1550	—	—	400	-40 to +93	SPRALHEAVY	180°	14 BAR	72/550958

ISSUE LETTER	ALTERATION	DRAWN INITIALS	DATE
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A ITEM 01 NOTE AMENDED TO
INCLUDE HOSE SPECIFICATION
MFD

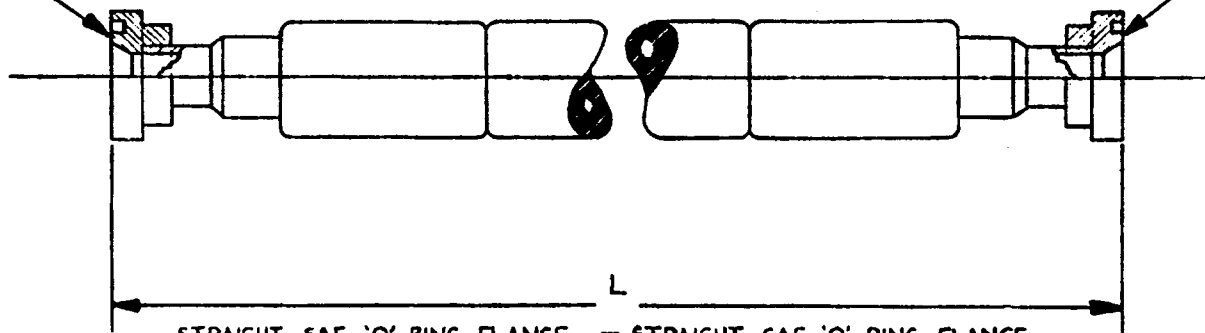
TYPE 'P'
RUBBER HOSE
31.8mm BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	—	A			
Drawing N°	M-A3-9003001				
Drawn	Traced	Checked	Date		
PSG	—		11/80		

FLANGE TO SAE J518c
STANDARD PRESSURE SERIES

FLANGE TO SAE J518c
STANDARD PRESSURE SERIES



STRAIGHT SAE 'O' RING FLANGE - STRAIGHT SAE 'O' RING FLANGE
SWAGED END FITTINGS

NOTE - ITEM 01 TO CONFORM GENERALLY TO SAE 100R10-A BUT WITH A WORKING PRESSURE OF 400 BAR AND A MIN BEND RADIUS OF 420 mm

ISSUE LETTER	ALTERATION	DRAWN'S INITIALS	DATE
	A NEW DRG No ADDED			SB 1/81
	B NOTE ADDED RE HOSE SPEC		

ITEM No.	LENGTH L m.m.	HOSE DATA					HOSE ASSY. WORKING PRESSURE	BR CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS BAR	TEMPERATURE °C	REINFORCED BY			
		SAE	BSS						
01	400	—	—	400	-40 TO +93	4 SPIRAL HEAVY	190 BAR	72/4551	56
02									
03									
04									
05									
06									
07									
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16									
17									

FORMERLY BR DRG No
G-A3-964

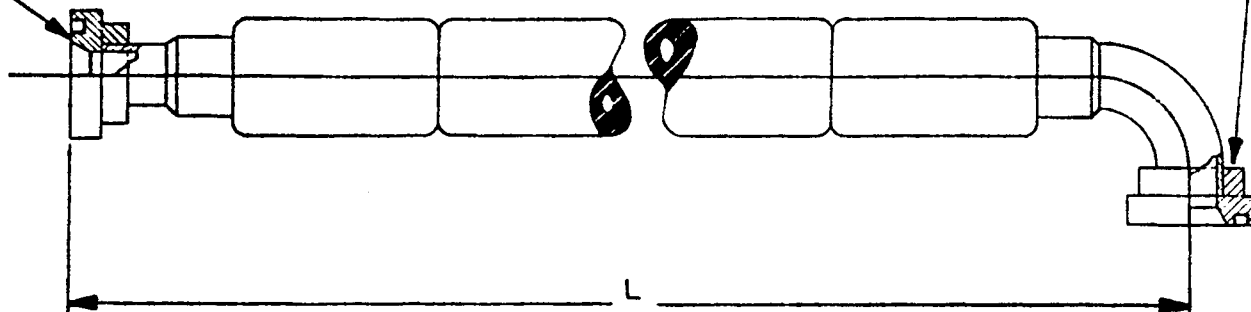
TYPE P
RUBBER HOSE
31.8 m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale	A	B		
Drawing No	M-A3-9003002			
Drawn	Traced	Checked	Date	

FLANGE TO SAE J518c
STANDARD PRESSURE SERIES

FLANGE TO SAE J518c
STANDARD PRESSURE SERIES



STRAIGHT SAE 'O' RING FLANGE - 90° SAE 'O' RING FLANGE
SWAGED END FITTINGS

NOTE - ITEM 01 TO CONFORM GENERALLY TO SAE 100 R10-A BUT WITH A WORKING PRESSURE OF 400 BAR AND A MIN BEND RADIUS OF 420 mm.

ISSUE LETTER	ALTERATION	DMAN'S INITIALS	DATE
A	NEW DRG No ADDED	SB	1/81
B	NOTE ADDED RE HOSE SPEC	SL	1/81

ITEM No.	LENGTH L m.m.	HOSE DATA				HOSE ASSY. WORKING PRESSURE	BR CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS BAR	TEMPERATURE °C			
		SAE	BSS					
01	800	—	—	400	-40 to +93	4 SPIRAL HEAVY	190 BAR	72/4552 56
02								
03								
04								
05								
06								
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08								
09								
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11								
12								
13								
14								
15								
16								
17								

FORMERLY BR DRG No
G-A3-965

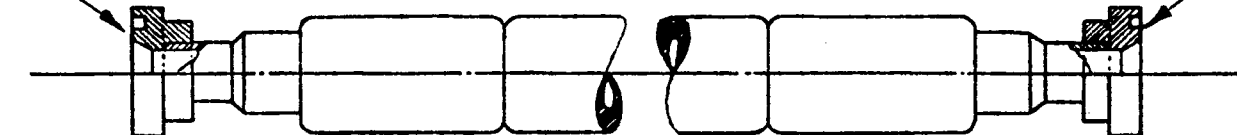
TYPE P
RUBBER HOSE
31.8 m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale	A	B		
Drawing No	M-A3-9003003			
Drawn	Traced	Checked	Date	
			EX 79	

FLANGE TO SAE J518c
HIGH PRESSURE SERIES

FLANGE TO SAE J518c
HIGH PRESSURE SERIES



STRAIGHT SAE O RING FLANGE - STRAIGHT SAE O RING FLANGE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION		DRAWN INITIALS	DATE
	A	FIRST ISSUE			RAK	40

ITEM No.	LENGTH Lmm	HOSE DATA					HOSE ASSY WORKING PRESSURE	BR CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING	TEMP.	REINFORCED			
		SAE	BSS	PRESSBAR	°C	BY			
01	1345	100R10-A	4586-2	400	-40 to +93	4 SPIRAL HEAVY	400BAR	72/4092	253,254

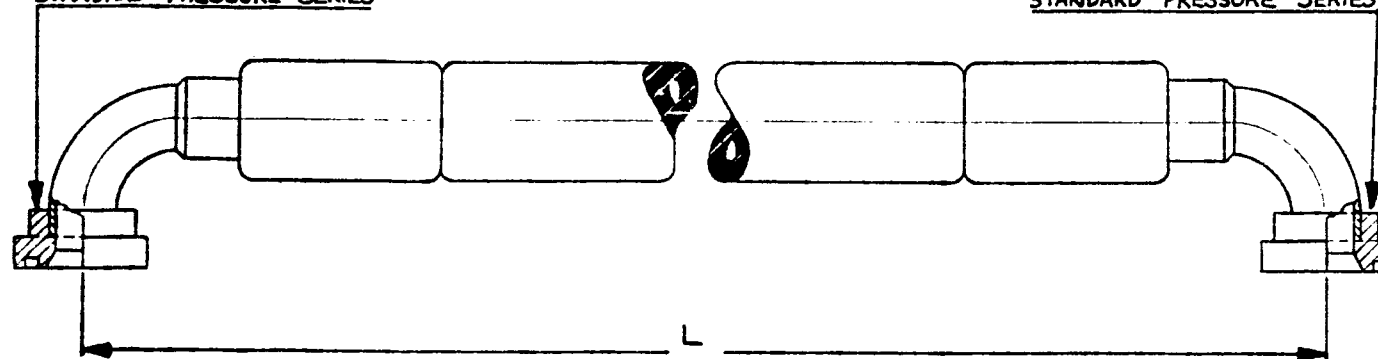
**TYPE 'P'
RUBBER HOSE
31.8mm BORE**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

Scale	—	A		
Drawing No	M-A3-9003005			
Drawn/Traced/Checked	PSG/—/—			
Date				6/82

FLANGE TO SAE J518c
STANDARD PRESSURE SERIES

FLANGE TO SAE J518c
STANDARD PRESSURE SERIES



90° SAE 'O' RING FLANGE — 90° SAE 'O' RING FLANGE
SWAGED END FITTINGS

NOTE - ITEM 01 & 02 TO CONFORM GENERALLY TO SAE 100 R10-A BUT WITH A WORKING PRESSURE OF 400 BAR AND A MIN BEND RADIUS OF 420 mm.

ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH THE COUPLING FURTHEST FROM THE EYE AT ZERO

ITEM No	LENGTH L mm	HOSE DATA					ANGULAR RELATION	HOSE ASSY WORKING PRESSURE	BR CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS BAR	TEMPERATURE °C	REINFORCED BY				
		SAE	BSS							
01	800	—	—	400	-40 to +93	4 SPIRAL HEAVY	90°	190 BAR	72/4553	56
02	800	—	—	"	"	"	0°	"	72/4554	56
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										

ISSUE LETTER	ALTERATION	ISSUER'S INITIALS	DATE
A	NEW DRG No ADDED	SB	1/81
B	NOTE ADDED RE HOSE SPEC		1/81

FORMERLY BR DRG No G-A3-966

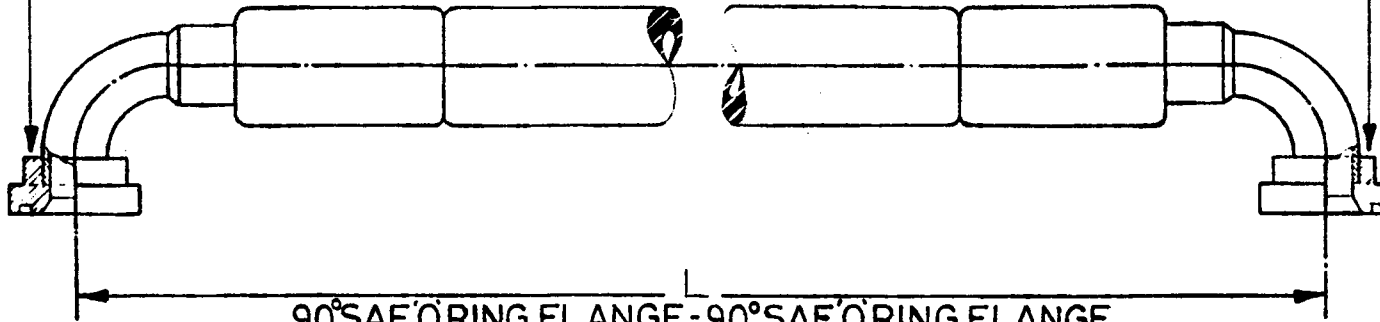
TYPE P
RUBBER HOSE
31.8 m.m. BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale		A	B		
Drawing No	M-A3-9003008				
Drawn	Traced	Checked	Date		

FLANGE TO SAE J518c
HIGH PRESSURE SERIES

FLANGE TO SAE J518c
HIGH PRESSURE SERIES



90°SAE O-RING FLANGE - 90°SAE O-RING FLANGE
SWAGED END FITTINGS

ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH
THE COUPLING FURTHEST FROM THE EYE AT ZERO

ISSUE LETTER	ALTERATION		DRAWN INITIALS	DATE
	A	FIRST ISSUE		

ITEM No.	LENGTH Lmm	HOSE DATA				ANGULAR RELATION	HOSE ASSY WORKING PRESSURE	BR CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	BSS	WORKING PRESSBAR	TEMP °C					REINFORCED BY
01	1300	100R10-A	4586-2	400	-40 TO +93	4 SPIRAL HEAVY	0°	7214093	253,254,

TYPE 'P'
RUBBER HOSE
31.8mm BORE

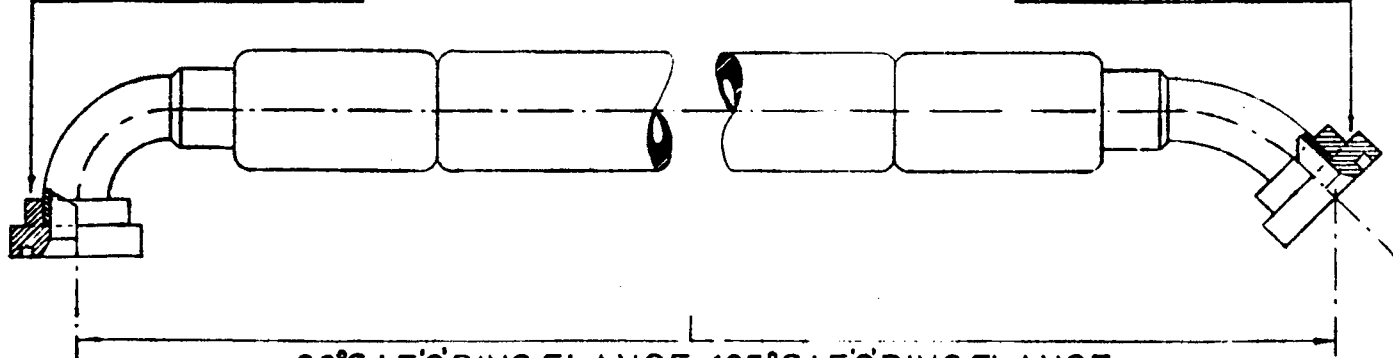
**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

Scale	—	A		
Drawing No	M-A3-9003010			
Drawn	Traced	Checked	Date	
PSG	—		6/82	

ISSUE LETTER	ALTERATION	DATE
A	NOTE ADDED RE HOSE SPEC	

FLANGE TO SAE J518c
HIGH PRESSURE SERIES

FLANGE TO SAE J518c
HIGH PRESSURE SERIES



90° SAE O-RING FLANGE - 135° SAE O-RING FLANGE
SWAGED END FITTINGS
ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH
THE COUPLING FURTHEST FROM THE EYE AT ZERO.

NOTE :- ITEM 01 TO CONFORM GENERALLY TO SAE 100 R10-A BUT WITH A WORKING PRESSURE OF 400 BAR AND A MIN BEND RADIUS OF 420mm.

ITEM No.	LENGTH Lmm	HOSE DATA					ANGULAR RELATION	HOSE ASSY. WORKING PRESSURE	BR CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	BSS	WORKING PRESS BAR	TEMP °C	REINFORCED BY				
01	1630	—	—	400	-40 to +93	4 SPIRAL HEAVY	270°	260 BAR	72/5522	58.

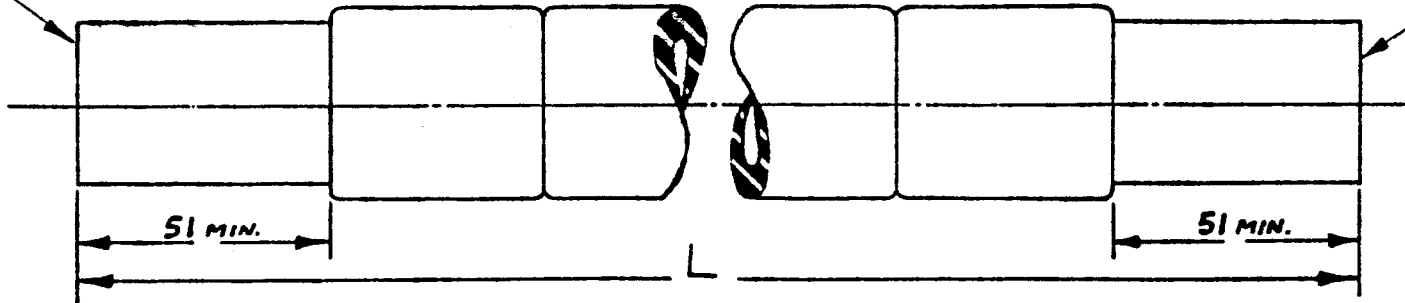
TYPE 'P'
RUBBER HOSE
31.8mm BORE

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ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	—	A		
Drawing No	M-A3-9003011			
Drawn	Traced	Checked	Date	
PSG	—			1/81

1/2" O-DIAM. HEAVY DUTY.

1/2" O-DIAM. HEAVY DUTY.



STANDPIPE — STANDPIPE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DATE
A	ITEM 2, CLASS 45 ADDED	11/25
B	NEW DRG No ADDED	58/1/61
C	ITEM 01 CLASS 24 DEL	

MPD

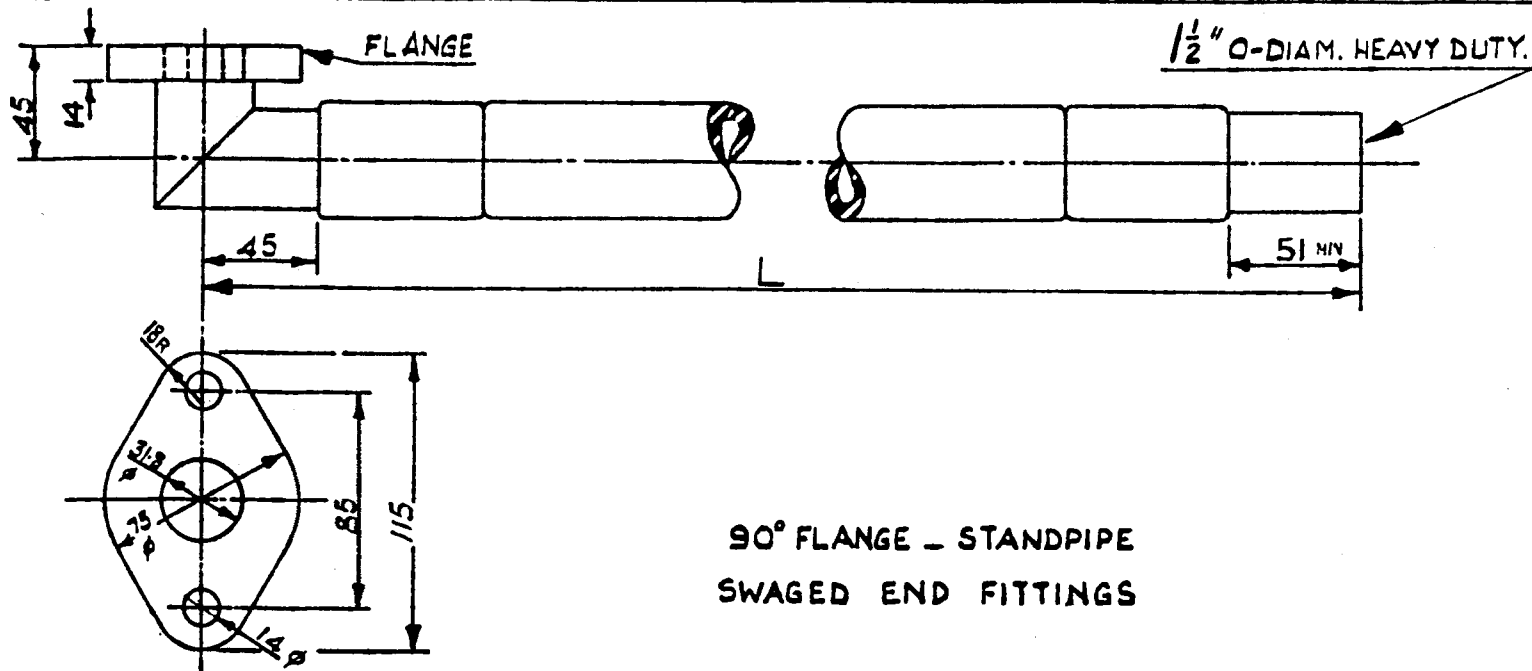
ITEM No.	LENGTH L. mm	HOSE DATA					BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY		
		SAE	BSS					
01	460	100R1-A	3832-B1	43	-40 To +93	1 WIRE BRAID	61/41101	25
02	510	"	"	"	"	"	61/41102	45
03								
04								
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FORMERLY BR DRG No
L-A3-5664

TYPE P
RUBBER HOSE
31.8 mm BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	—	A	B	C	
Drawing No	M-A3-9003012				
Drawn/Traced	JRS				Date



90° FLANGE - STANDPIPE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	ISSUERS INITIALS	DATE
A	NEW DRG No ADDED	SB	1/81
B	ITEM 01 CLASS 44 DEL.	MF	

ITEM No.	LENGTH L - mm	HOSE DATA				BR. CAT. NUMBER	VEHICLE/ CLASS	
		SPECIFICATION SAE	SPECIFICATION BSS	WORKING PRESS. BAR	TEMPERATURE °C			REINFORCED BY
01	540	100R1-A	3832-B1	43	-40 to +93	WIRE BRAID	61/41104	45,46
02								
03								
04								
05								
06								
07								
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09								
10								
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12								
13								
14								
15								
16								

FORMERLY BR DRG No L-A3-6560

TYPE P
RUBBER HOSE
31.8 mm BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale 1:2

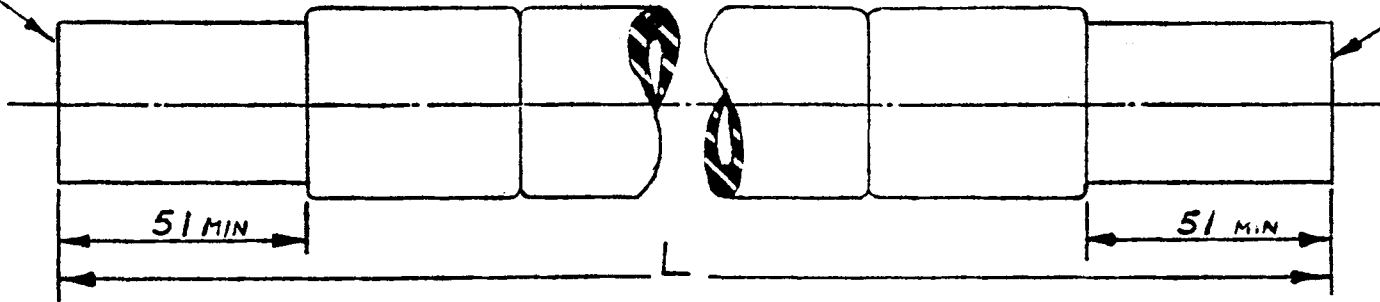
A	B		
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Drawing No M-A3-9003013

Drawn	Traced	Checked	Date
JRS			JA

1 1/16" O-DIAM. HEAVY DUTY.

1 1/16" O-DIAM. HEAVY DUTY.



STANDPIPE - STANDPIPE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DRAWN INITIALS	DATE
A	STANDPIPE LENGTH WAS 54	JRS	6/76
B	NEW DRG No ADDED	SEW	5/83
C	ITEM 02 DEL.	WFL	1/81

ITEM No.	LENGTH L-mm	HOSE DATA					BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY		
		SAE	BSE					
01	420	100R1-A	3832-B1	43	-40 to +93	1 WIRE BRAID	61/41103	45,46
02								
03								
04								
05								
06								
07								
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18								

FORMERLY BR DRG No
L-A3-6558

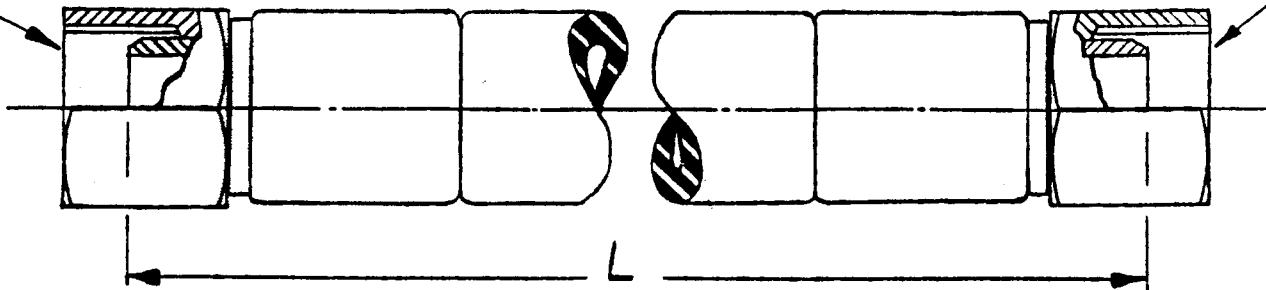
TYPE P
RUBBER HOSE
31.8 m.m. BORE

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER**
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	—	A	B	C	
Drawing No	M-A3-9003014				
Drawn	JRS	Traced	—	Checked	—
Date	—				1/4/77

1/2" BSP

1/2" BSP



STRAIGHT FEMALE - STRAIGHT FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DMAS INITIALS	DATE
A	ITEM 3 CLASS 44 & 45 ADDED.	FA	7/85
B	ITEMS 4 & 5 ADDED.	FA	7/78
C	ITEM 6 ADDED.	FA	7/78
D	ITEM 7 ADDED.	FA	7/78
E	ITEM 1 DEL. 3 CLASS 47/6 DEL.	FA	7/80
F	ITEMS 8 & 9 ADDED.	FA	7/80
G	NEW DRG No ADDED	FA	7/81
H	ITEM 03 CLASS 44 DEL.	FA	7/81
J	ITEM 10 ADDED	FA	7/83
K	ITEM 02 DELETED	ACB	8/85

ITEM No	LENGTH L. m.m.	HOSE DATA				BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE ° C			REINFORCED BY
SAE	BSS						
01							
02							
03	545	100R1-A	3832-1B	34	-40 TO +93	1 WIRE BRAID	
04	500	-	-	-	-	-	
05	350	-	-	-	-	-	
06	800	-	-	-	-	-	
07	1350	-	-	-	-	-	
08	700	-	-	-	-	-	
09	900	-	-	-	-	-	
10	450	-	-	-	-	-	
11							
12							
13							
14							
15							
16							
17							
18							

FORMERLY BR DRG.No.
L-A3-5617

TYPE P
RUBBER HOSE
38.1 m.m. BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale ———

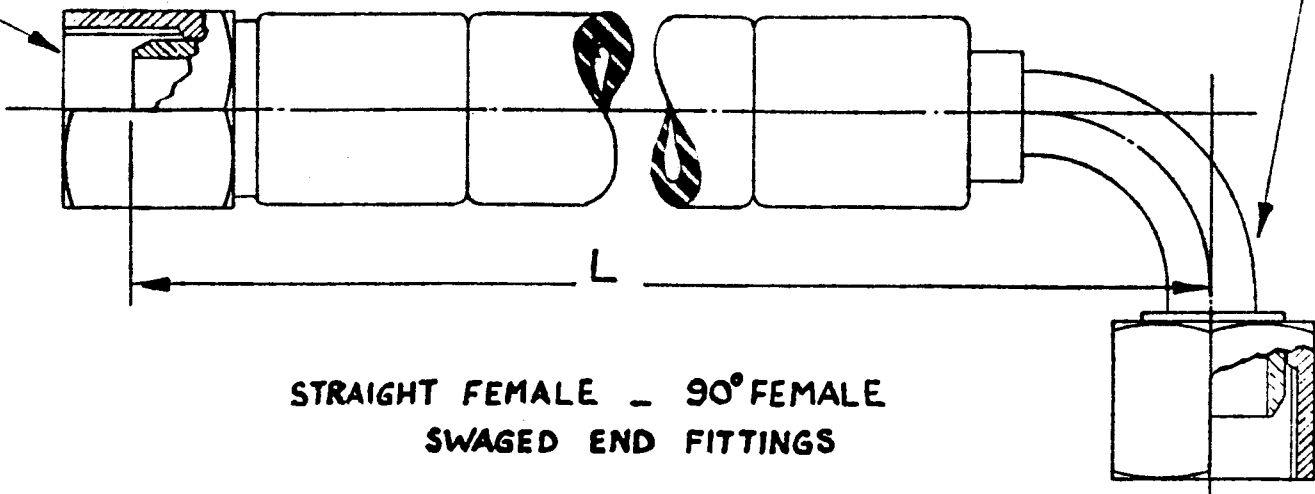
A	B	C	D	E
F	G	H	J	K

Drawing No
M-A3-9003015

Drawn Traced Checked Date

1/2" BSP.

1/2" BSP



STRAIGHT FEMALE - 90° FEMALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DATE	INITIALS
A	ITEM 1 CLASS 46 ADDED.	1/75	
B	ITEM 1 CLASS 33 ADDED.	1/75	
C	ITEM 1 CLASS 33 DEL.	1/77	
D	ITEM 3 ADDED.	1/77	
E	ITEM 1 CLASS 210 ADDED.	1/77	
F	ITEM 2 DEL. - 4 ADDED.	1/78	
G	NEW DRG No ADDED	1/78	
H	ITEM 05 ADDED	1/78	

ITEM No.	LENGTH L - m.m.	HOSE SPECIFICATION		WORKING PRESS. BAR	HOSE DATA		BR. CAT. NUMBER	VEHICLE / CLASS
		S.A.E.	B.S.S.		TEMPERATURE °C	REINFORCED BY		
01	510	100R1-A	3832-B1	34	-40 TO +93	1 WIRE BRAID	61/41061	4546210.
02								
03	750	-	-	-	-	-	72/2741	56.
04	780	-	-	-	-	-	72/4590	58.
05	500	-	-	240	-	6 SPIRAL HEAVY	72/2867	56.
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								

FORMERLY BR DRG.No.
L-A3-5626

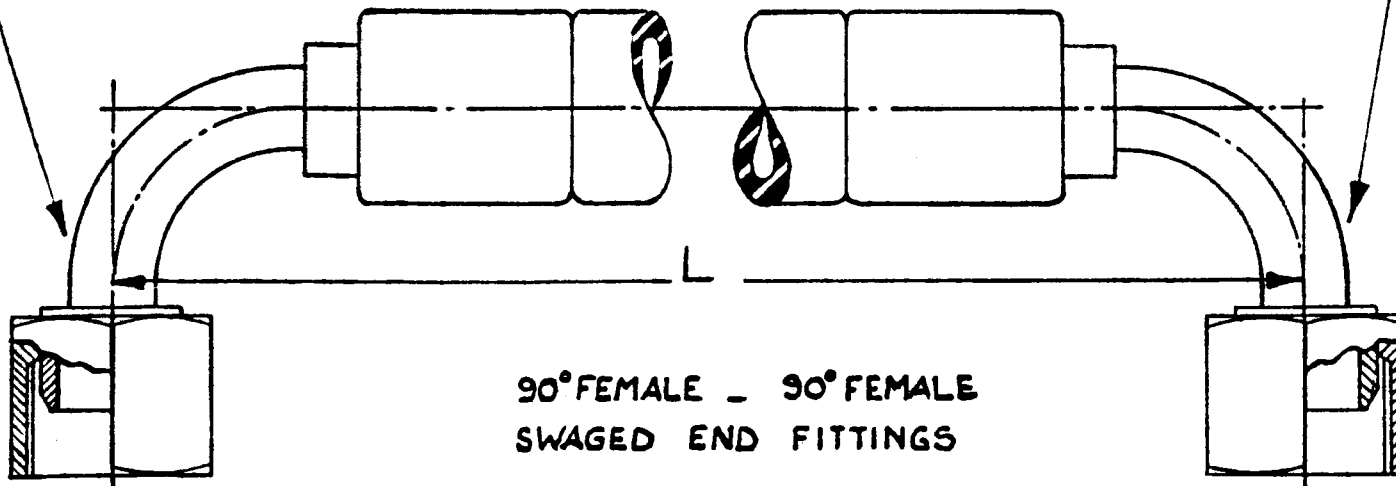
**TYPE P
RUBBER HOSE
38.1 m.m. BORE**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

Scale	A	B	C	D	E
Drawing No M-A3-9003016	F	G	H		
Drawn	Traced	Checked	Date		

1/2" BSP

1/2" BSP



90° FEMALE - 90° FEMALE
SWAGED END FITTINGS

ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH
THE COUPLING FURTHEST FROM THE EYE AT ZERO

ISSUE LETTER	ALTERATION	DMARKS INITIALS	DATE
A	ITEM 3 ADDED		1/77
B	ITEM 4 ADDED		11/77
C	ITEM 3 DELETED		5/80
D	ITEM 2 DELETED		7/80
E	NEW DRG No ADDED		58/81
F	ITEM 01 CLASS 44 DEL.		
G	ITEM 04 DELETED		

ITEM No.	LENGTH L.m.m.	HOSE DATA					ANGULAR RELATION	BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY			
		S.A.E.	B.S.S.						
01	485	100R1-A	3832-B1	34.5	-40 to +93	1 WIRE BRAID	270°	61/41088	45.46
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									

FORMERLY BR DRG No
L-A3-5642

TYPE P
RUBBER HOSE
38.1 m.m. BORE

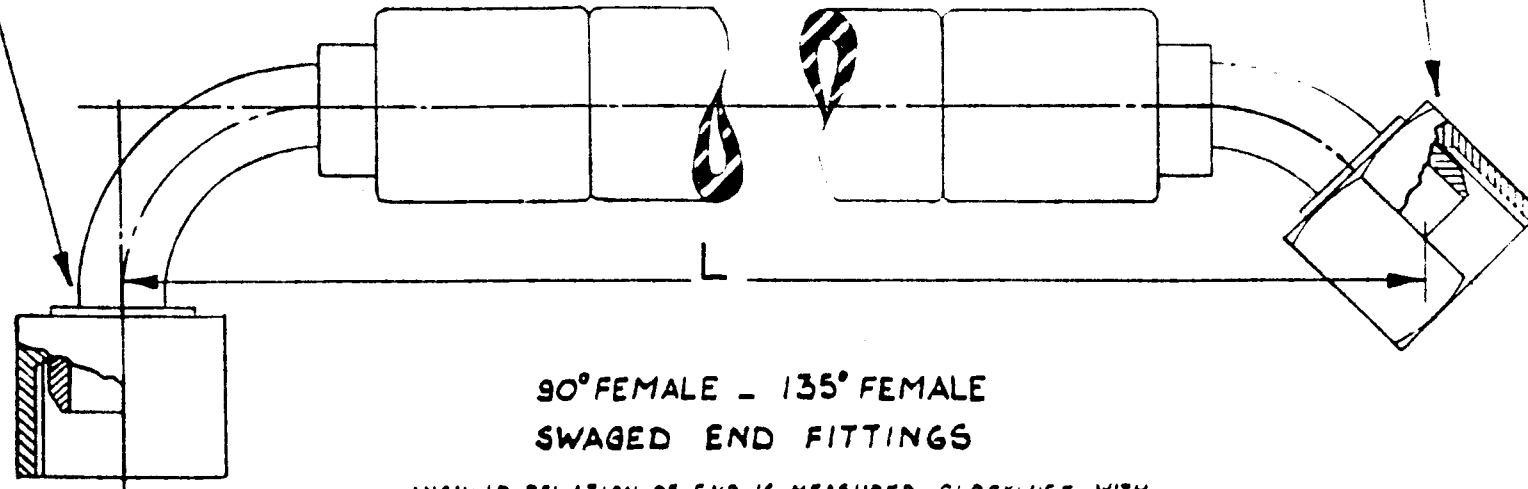
CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale		A	B	C	D	E
Drawing No	M-A3-9003017	F	G			
Drawn	Traced	Checked	Date			

JAN 75

1/2" BSP

1/2" BSP



90° FEMALE - 135° FEMALE
SWAGED END FITTINGS

ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH
THE COUPLING FURTHEST FROM THE EYE AT ZERO.

ISSUE LETTER	ALTERATION	D.M.A.N.S. INITIALS	DATE
A	ITEM 2 ADDED		3/77
B	ITEM 1 DELETED		3/80
C	NEW DRG No ADDED		5/81

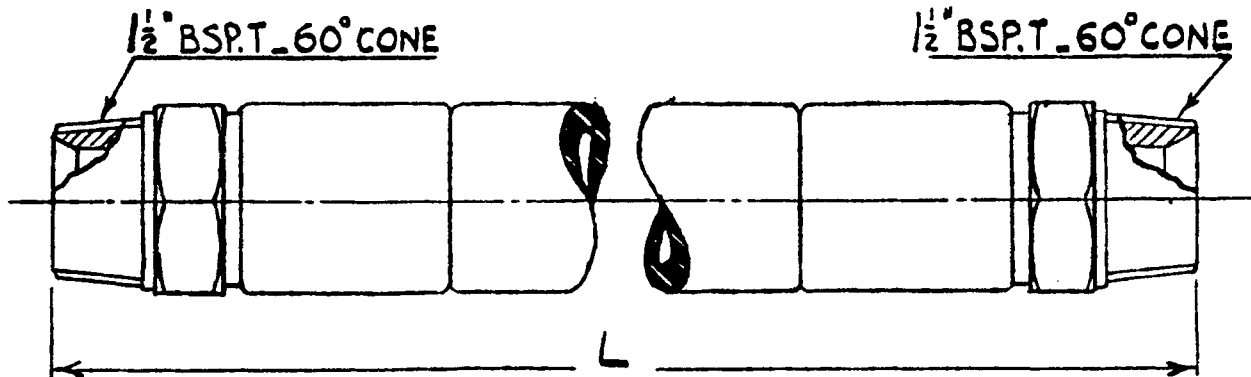
ITEM No.	LENGTH L.m.m.	HOSE DATA				ANGULAR RELATION	BR. CAT. NUMBER	VEHICLE/ CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C				REINFORCED BY
		S.A.E	B.S.S.					
01								
02	600	100R1-A	3832-B1	34	-40 to +93	1 WIRE BRAID	180°	71/3380 56
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								

FORMERLY BR DRG No
L-A3-10435

TYPE P
RUBBER HOSE
38.1 m.m. BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale		A	B	C
Drawing No	M-A3-9003018			
Drawn/Traced/Checked	1/RS			3/77



TAPER MALE - TAPER MALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DATE
A	NEW DRG No ADDED	18/1/81

ITEM No	LENGTH L_m.m.	HOSE DATA				BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR.	TEMPERATURE °C			REINFORCED BY
		SAE	BSS				
01	350	100R1-A	3832-B1	34	-40To+93	WIRE BRAID	61/41007 47
02	460	"	"	"	"	"	61/41008 47
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							

FORMERLY BR DRG No L-A3-5607

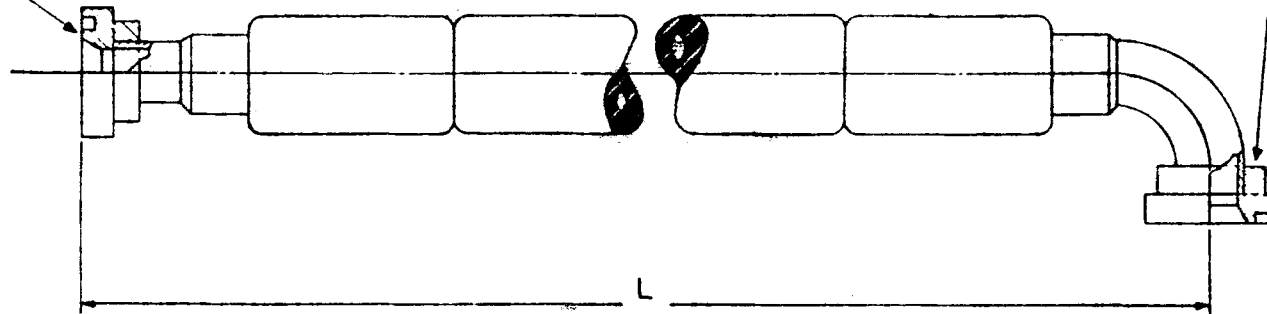
TYPE P
RUBBER HOSE
38.1 m.m BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	—	A		
Drawing No	M-A3-9003020			
Drawn	Traced	Checked	Date	
—	—	—	—	

FLANGE TO SAE J518c
STANDARD PRESSURE SERIES

FLANGE TO SAE J518c
STANDARD PRESSURE SERIES



STRAIGHT SAE 'O' RING FLANGE - 90° SAE 'O' RING FLANGE
SWAGED END FITTINGS

NOTE - ITEM 02 TO CONFORM GENERALLY TO SAE 100 R10-A BUT WITH A WORKING PRESSURE OF 400 BAR AND A MIN BEND RADIUS OF 510 mm.

ISSUE LETTER	ALTERATION	DATE
A	NEW DRG No ADDED	SB 1/81
B	ITEM 02 NOTE ADDED RE HOSE SPEC	M 1/83
C	ITEM 01 DELETED	17/08/85

ITEM No.	LENGTH L m.m.	HOSE DATA				HOSE ASSY WORKING PRESSURE	BR CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS BAR	TEMPERATURE °C				REINFORCED BY
		SAE	BSS					
01								
02	500	—	—	400	"	4 SPIRAL HEAVY	190 BAR	
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								

FORMERLY BR DRG No
G-A3-967

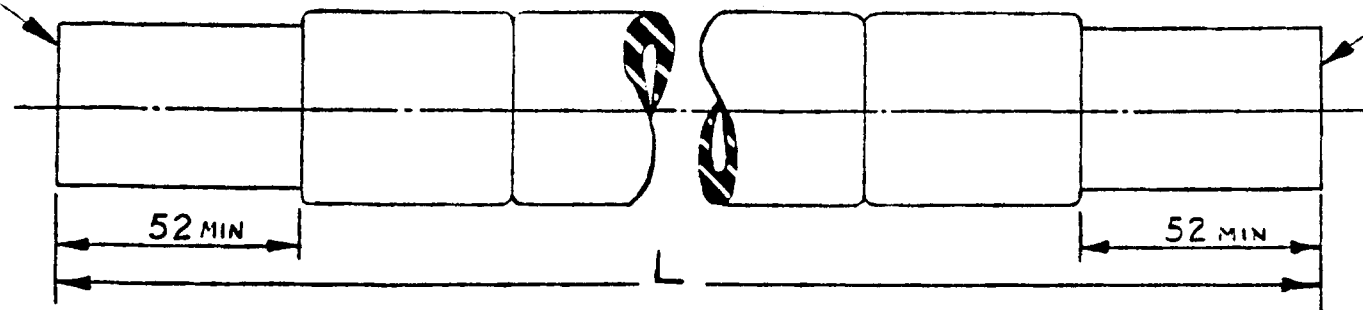
TYPE P
RUBBER HOSE
38.1 mm BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale	A	B	C	
Drawing No M-A3-9003022				
Drawn	Traced	Checked	Date	

$\frac{1}{32}$ " O-DIAM. HEAVY DUTY.

$\frac{1}{32}$ " O-DIAM. HEAVY DUTY.



STANDPIPE — STANDPIPE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	DMAN'S INITIALS	DATE
A	STANDPIPE LENGTH WAS 57	JRS	6/76
B	ITEM 1 DELETED	JRS	7/80
C	NEW DRG No ADDED	JRS	1/81

ITEM No.	LENGTH L-mm	HOSE DATA					BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY		
		SAE	BSS					
01								
02								
03	1215	100R1-A	3832-B1	34.5	-40 to +93	1 WIRE BRAID	14/1912 DMU	
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								

FORMERLY BR DRG No L-A3-6559

TYPE P
RUBBER HOSE
38.1 m.m. BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale — A B C

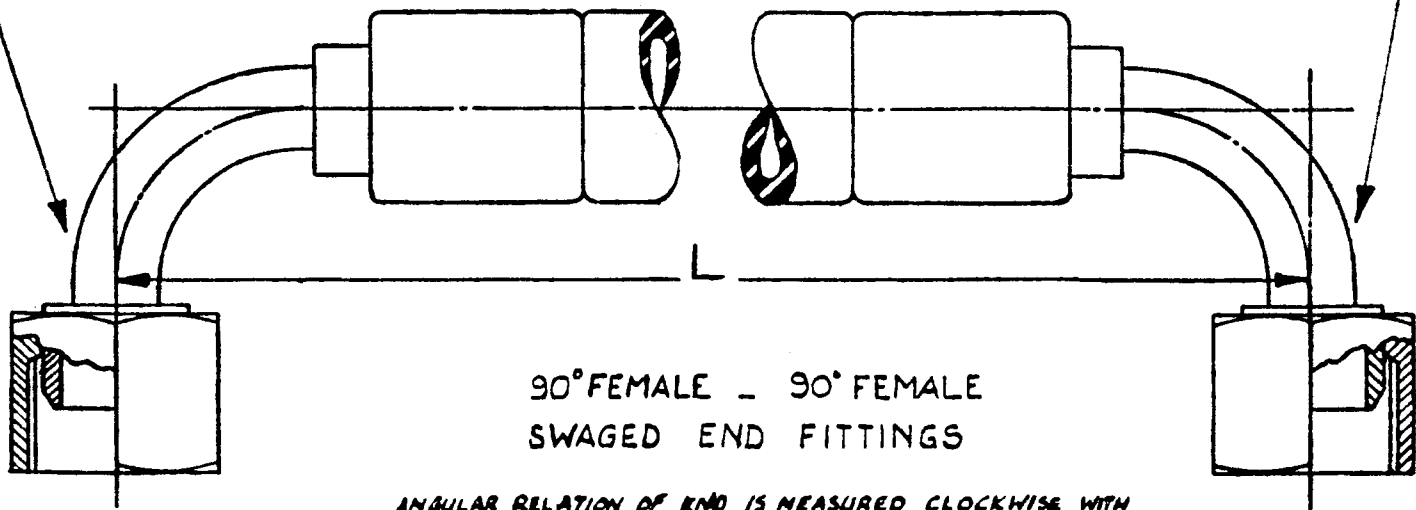
Drawing No M-A3-9003031

Drawn Traced Checked Date
JRS — — —

ISSUE LETTER	ALTERATION	DRAWN BY	DATE
A	ITEM 1 CANCELLED	JRS	2/77
B	ITEM 1 REINSTATED	JRS	5/80
C	NEW DRG No ADDED	JRS	10/81

2" BSP

2" BSP



90° FEMALE - 90° FEMALE
SWAGED END FITTINGS

ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH THE COUPLING FURTHEST FROM THE EYE AT ZERO

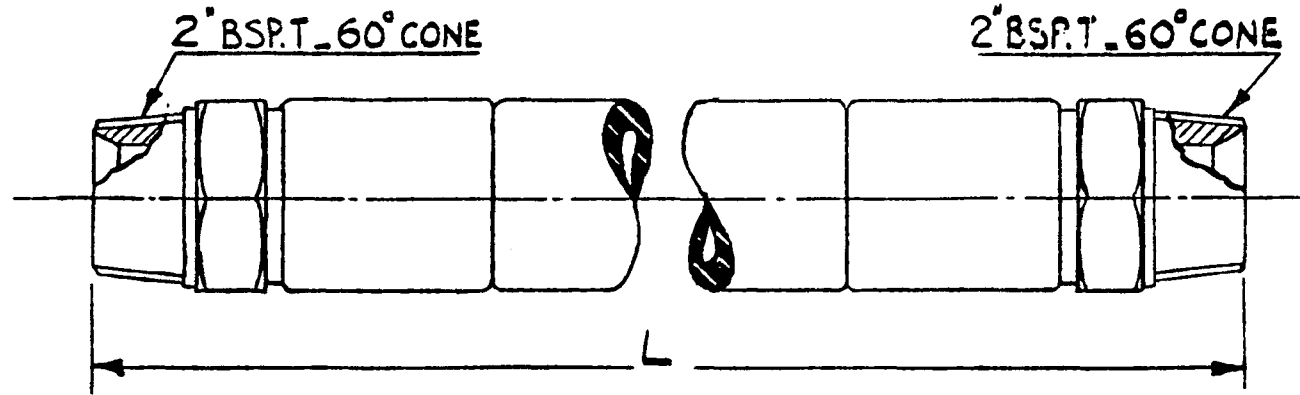
ITEM No.	LENGTH L.m.m.	HOSE DATA					ANGULAR RELATION	BR. CAT. NUMBER	VEHICLE / CLASS.
		SPECIFICATION		WORKING PRESS. BAR	TEMPERATURE °C	REINFORCED BY			
		S.A.E.	B.S.S.						
01	485	100R1-A	3832-B1	26	-40 to +93	1 WIRE BRAID	0°	61/41089	47
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									

FORMERLY BR DRG No L-A3-5643

TYPE P
RUBBER HOSE
50.8 m.m. BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale	—	A	B	C
Drawing No	M-A3-9003033			
Drawn	JRS	Traced	Checked	Date
				2/77



TAPER MALE - TAPER MALE
SWAGED END FITTINGS

ISSUE LETTER	ALTERATION	MAN'S INITIALS	DATE
A	ITEM 2 ADDED	SA	3/70
B	NEW DRG. No. ADDED	SA	1/71

ITEM No	LENGTH L_m.m.	HOSE DATA					BR. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR.	TEMPERATURE ° C	REINFORCED BY		
		SAE	BSS					
01	355	100R1-A	3832-B1	26	-40 to +93	1 WIRE BRAID	61/41009	47
02	300	"	"	"	"	"	61/41488	47/7
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								

FORMERLY BR DRG No
L-A3-5608

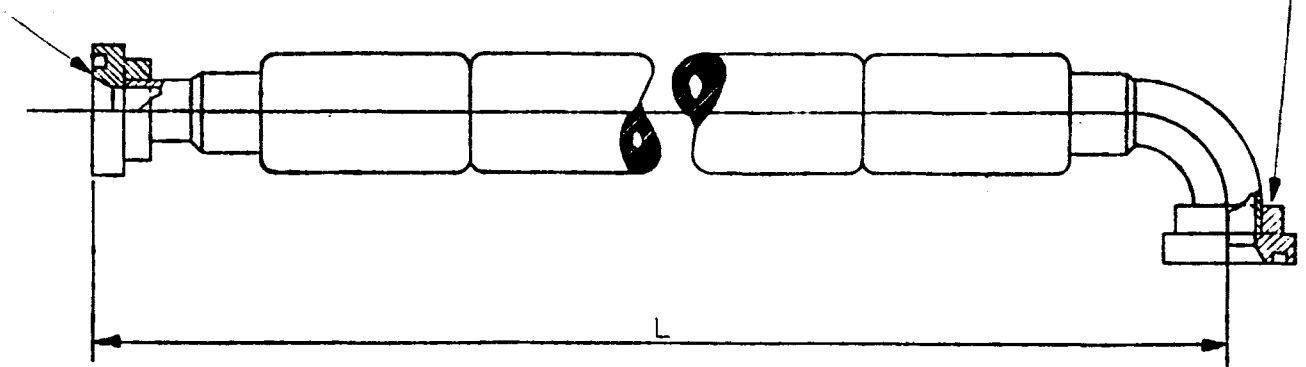
TYPE P
RUBBER HOSE
50.8 m.m BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS + RATIONALIZATION
DERBY

Scale	—	A	B		
Drawing No	M-A3-9003034				
Drawn	Traced	Checked	Date		

FLANGE TO SAE J518c
STANDARD PRESSURE SERIES

FLANGE TO SAE J518c
STANDARD PRESSURE SERIES



STRAIGHT SAE 'O' RING FLANGE - 90° SAE 'O' RING FLANGE
SWAGED END FITTINGS

REVISION LETTER	ALTERATION	DRAWN'S INITIALS	DATE
	A NEW DRG. No. ADDED. ITEM 01 HOSE ASSY. PRES. WAS 50 BAR.			MFD

FORMERLY BR DRG. No. G-A3-968

TYPE P
RUBBER HOSE
50.8mm BORE

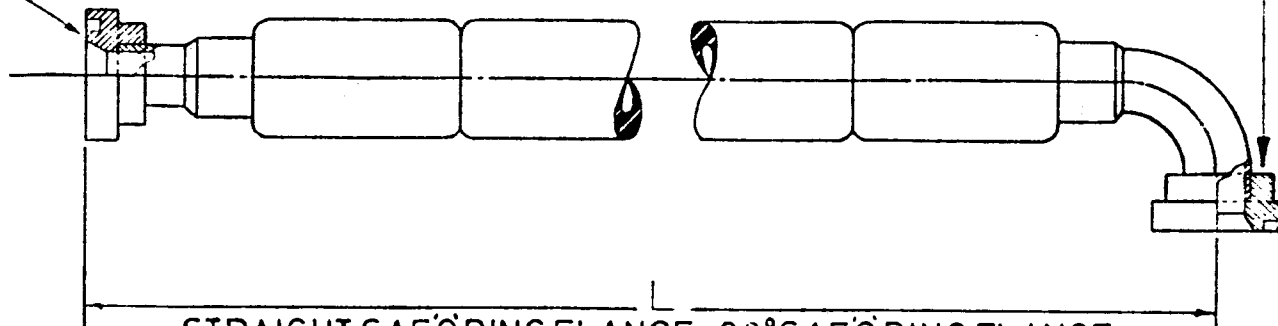
CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	A		
Drawing No	M-A3-9003036		
Drawn / Traced / Checked / Date			11/80

ITEM No.	LENGTH L m.m	HOSE DATA				HOSE ASSY WORKING PRESSURE	BR CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS BAR	TEMPERATURE °C				REINFORCED BY
		SAE	BSS					
01	750	100R1-A	3832-B1	42	-40 TO +93	1 WIRE BRAID	10 BAR	72/4580 56.
02	860	-	-	-	-	-	5 BAR	72/4581 58.
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								

FLANGE TO SAE J518c
HIGH PRESSURE SERIES

FLANGE TO SAE J518c
HIGH PRESSURE SERIES



STRAIGHT SAE ORING FLANGE - 90° SAE ORING FLANGE
SWAGED END FITTINGS

NOTE :- ITEM 01 TO CONFORM GENERALLY TO SAE 100 R10-A BUT WITH A WORKING PRESSURE OF 350 BAR AND A MIN BEND RADIUS OF 660mm.
TOL ON LENGTH TO BE ±8

ISSUE LETTER	ALTERATION	DVA'S INITIALS	DATE
	A ASSEMBLY PRESSURE WAS 276 BAR			3/2/81
	B ITEM 01 NOTE AMENDED TO INCLUDE HOSE SPEC AND TOL ON LENGTH.		4/83

MFD

ITEM No.	LENGTH Lmm	HOSE DATA				HOSE ASSY WORKING PRESSURE	BR CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	SPECIFICATION BSS	WORKING PRESSURE BAR	TEMP °C				REINFORCED BY
01	630	—	—	350	-40 to +93	SPRAL HEAVY	72/5514	58.

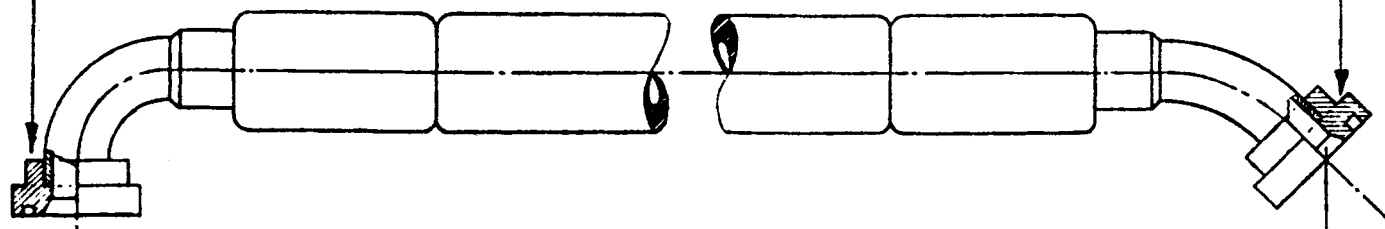
TYPE 'P'
RUBBER HOSE
50.8mm BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	—	A	B		
Drawing No.	M-A3-9003039				
Drawn	Traced	Checked	Date		
PSG	—	XXI	11/8		

FLANGE TO SAE J518c
HIGH PRESSURE SERIES

FLANGE TO SAE J518c
HIGH PRESSURE SERIES



90° SAE O-RING FLANGE - 135° SAE O-RING FLANGE
SWAGED END FITTINGS

ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH
THE COUPLING FURTHEST FROM THE EYE AT ZERO.

NOTE - ITEM 01 & 02 TO CONFORM GENERALLY TO SAE 100R10-A BUT WITH A WORKING
PRESSURE OF 350 BAR AND A MIN. BEND RADIUS OF 660mm.

ISSUE LETTER	ALTERATION	ISSUE INITIALS	DATE
A	ASSEMBLY PRESSURE WAS 276 BAR.	S.K.	10/76
B	ITEM 01 & 02 NOTE AMENDED TO INCLUDE HOSE SPEC.	M.F.D.	1/78

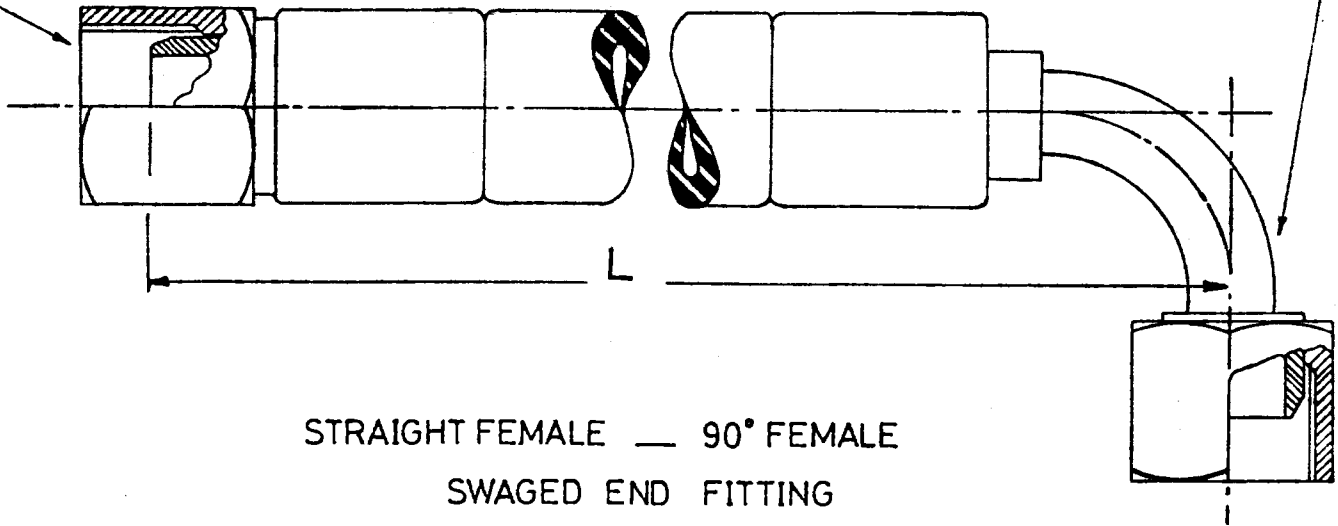
ITEM No.	LENGTH Lmm	HOSE DATA				ANGULAR RELATION	HOSE ASSY. WORKING PRESSURE	BR CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	BSS	WORKING PRESSURE BAR	TEMP. °C					REINFORCED BY
01	1350	—	—	350	-40 TO +93	SPIRAL HEAVY	125°	350 BAR	72/5511 58,
02	1500	—	—	.	.	.	90°	.	72/5512 58,

TYPE 'P'
RUBBER HOSE
50.8mm BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	—	A	B		
Drawing No?	M-A3-9003044				
Drawn	Traced	Checked	Date		
PSG	—	S.M.P.	11/77		

3/8 BSP.



STRAIGHT FEMALE — 90° FEMALE
SWAGED END FITTING

ISSUE LETTER	ALTERATION	INITIALS	DATE
A	FIRST ISSUE		
B	ITEM 02 ADDED		
C	ITEM 03 ADDED		
D	ITEM 01, CLASS 87/2 ADDED		
E	ITEM 04 ADDED		
F	ITEM 05 ADDED		

ITEM NO	LENGTH L-mm	HOSE DATA					BR CAT NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESSBAR	TEMPERATURE °C	REINFORCED BY		
		S.A.E.	B.S.S.					
01	635	100R2-A	3832-B2	276	-40 TO +93	2 WIRE BRAID	90/10520 86,87,87/2	
02	1000	100 R1-A	3832-B1	155	" " "	1 WIRE BRAID	15/78016 150	
03	750	" "	" "	"	" " "	" " "	150	
04	630	" "	" "	86	" " "	" " "	72/7465 56	
05	850	" "	" "	155	" " "	" " "	INT. DEM. COACH	

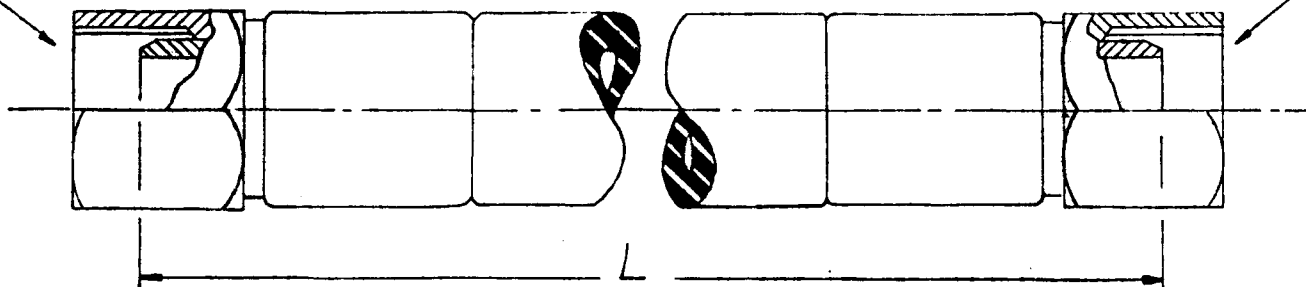
TYPE P
RUBBER HOSE
9.5 mm BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale		A	B	C	D	E
Drawing No		F				
M-A3-9009476						
Drawn	Traced	Checked	Date			
PSG			10/81			

1/2 BSP

1/2 BSP



STRAIGHT FEMALE- STRAIGHT FEMALE
SWAGED END FITTING

ISSUE LETTER	ALTERATION	DRAWN INITIALS	DATE
A	FIRST ISSUE	P.S.G.	8/82
B	ITEMS 02-04 ADDED	P.S.G.	7/82
C	ITEM 05 ADDED	P.S.G.	8/83
D	ITEM 06 ADDED	P.S.G.	8/83
E	ITEM 07 & 08 ADDED	P.S.G.	8/83
F	ITEM 08 RB002 & 004 ADDED	P.S.G.	1/84
G	ITEM 09 ADDED	P.S.G.	8/84
H	ITEM 10 ADDED	P.S.G.	8/85
J	ITEMS 02, 03, 04, CLASS 142 ADDED	P.S.G.	8/85
K	ITEM 11 ADDED	P.S.G.	8/85
L	ITEM 01 DELETED	P.S.G.	8/85

ITEM NO	LENGTH L-mm	HOSE DATA				BR CAT NUMBER	VEHICLE / CLASS
		S.A.E.	B.S.S.	WORKING PRESSURE	TEMPERATURE °C			REINFORCED BY
01							
02	1270	100R1-A	3832-1B	138	-40 TO +93	1 WIRE BRAID	15/80134 141,142
03	1900	-	-	-	" " "	" " "	15/80135 141,142
04	1190	-	-	-	" " "	" " "	15/80136 141,142
05	335	-	-	-	" " "	" " "	63/8283 MKIII
06	720	"	"	"	" " "	" " "	15/78011 150
07	705	"	"	"	" " "	" " "	15/81579 141
08	500	100R2-A	3832-B2	241	" " "	2 " "	15/78082 150 RB 002 & 004
09	430	100R1 A	3832- B1	138	" " "	1 " "	63/8558 BT10
10	775	"	"	"	" " "	" " "	97/7918 455
11	1045	"	"	"	" " "	" " "	15/82799 142

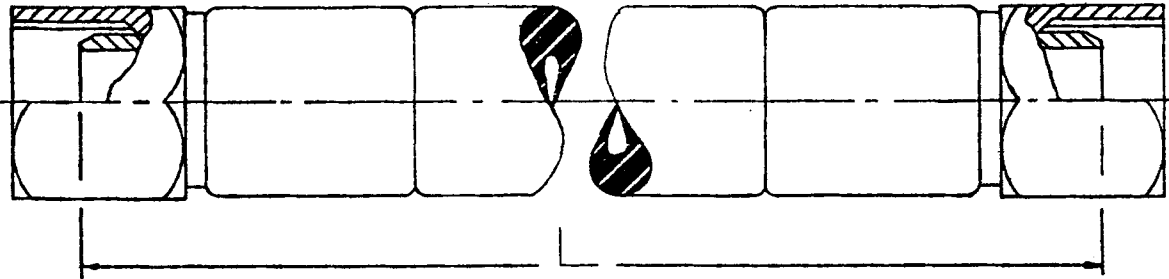
TYPE P
RUBBER HOSE
12.7mm BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	---	A	B	C	D	E
Drawing No	M-A3-9013066	F	G	H	J	K
Drawn	Traced	Checked	Date			
P.S.G.	---	---	3.82			

3/8BSP

3/8BSP



STRAIGHT FEMALE-STRAIGHT FEMALE
SWAGED END FITTING

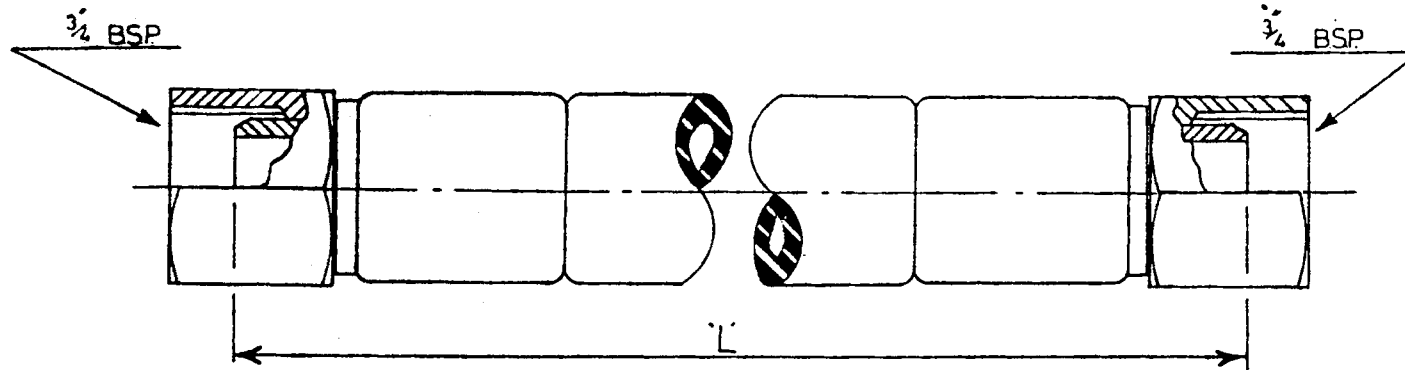
ISSUE LETTER	ALTERATION	ISSUES INITIALS	DATE
A	FIRST ISSUE		1/83
B	ITEM 02 ADDED		
C	ITEM 03 ADDED		
D	ITEM 04 ADDED		
E	ITEM 05 ADDED		
F	ITEM 06 ADDED		
G	ITEM 06 LENGTH WAS 640 & 1 WIRE BRAID		
H	ITEMS 07 & 08 ADDED		

ITEM NO	LENGTH L-mm	HOSE DATA				BR CAT NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESSURE	TEMPERATURE °C			REINFORCED BY
		S.A.E.	B.S.S.	BAR			
01	445	100R1-A	3832-B1	155	-40 TO +93	63/8284	MK III
02	470	"	"	"	" " "	63/8289	MK III
03	1050	"	"	"	" " "	51/16445	37
04	1100	"	"	"	" " "	51/16465	37
05	950	"	"	"	" " "	51/16482	37
06	580	100R2-A	3832-B2	"	" " "	71/4629	58
07	825	100R1-A	3832-B1	"	" " "	15/82801	142
08	885	"	"	"	" " "	15/82800	142

TYPE P
RUBBER HOSE
9.5mm BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	A	B	C	D	E
	F	G	H		
Drawing No M-A3-9019737					
Drawn	Traced	Checked	Date		
PSG			1/83		



STRAIGHT FEMALE - STRAIGHT FEMALE
SWAGED END FITTINGS

ALTERATION		ISSUE LETTER	DATE
A	FIRST ISSUE		
B	ITEM 02 & 03 ADDED		
C	ITEM 04 ADDED.		
D	ITEM 05 ADDED		
E	ITEMS 06 & 07 ADDED		

ITEM NO	LENGTH L-mm	HOSE DATA				BR CAT NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESSURE	TEMPERATURE °C			REINFORCED BY
		S.A.E.	B.S.S.				
01	690	100R1-A	3832-B1	86	-40 TO +93	1 WIRE BRAID	141
02	870	100R10-A	4586-2	345	" " "	4 SPIRAL HEAVY	RB005.
03	1800	"	"	"	" " "	" " "	RB005.
04	400	100R2-A	3832-B2	155	" " "	2 WIRE BRAID	RB 002 & 004.
05	720	100R1 A	3832 B1	86	" " "	1 WIRE BRAID	142
06	930	"	"	"	" " "	" " "	15/82802 142
07	980	"	"	"	" " "	" " "	15/82803 142

**TYPE P
RUBBER HOSE
19mm BORE**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

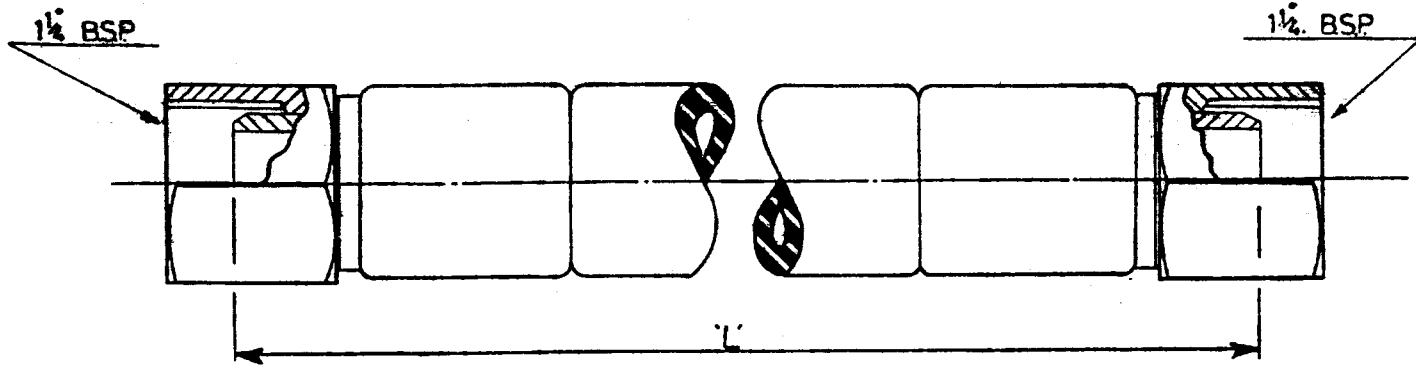
Scale _____

A	B	C	D	E
---	---	---	---	---

Drawing No
M-A3-9022958

Drawn / Traced / Checked / Date
I.R. / / / 1983

ISSUE LETTERS	ALTERATION		DATE
	INITIALS		
A	FIRST ISSUE		12/83



STRAIGHT FEMALE - STRAIGHT FEMALE
SWAGED END FITTINGS

ITEM NO	LENGTH L-mm	HOSE DATA				BR CAT NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESSURE	TEMPERATURE °C			REINFORCED BY
		S.A.E.	B.S.S.	BAR			
01	650	100R1-A	3832-B1	43	-40 TO +93	1 WIRE BRAID	15/81577 141

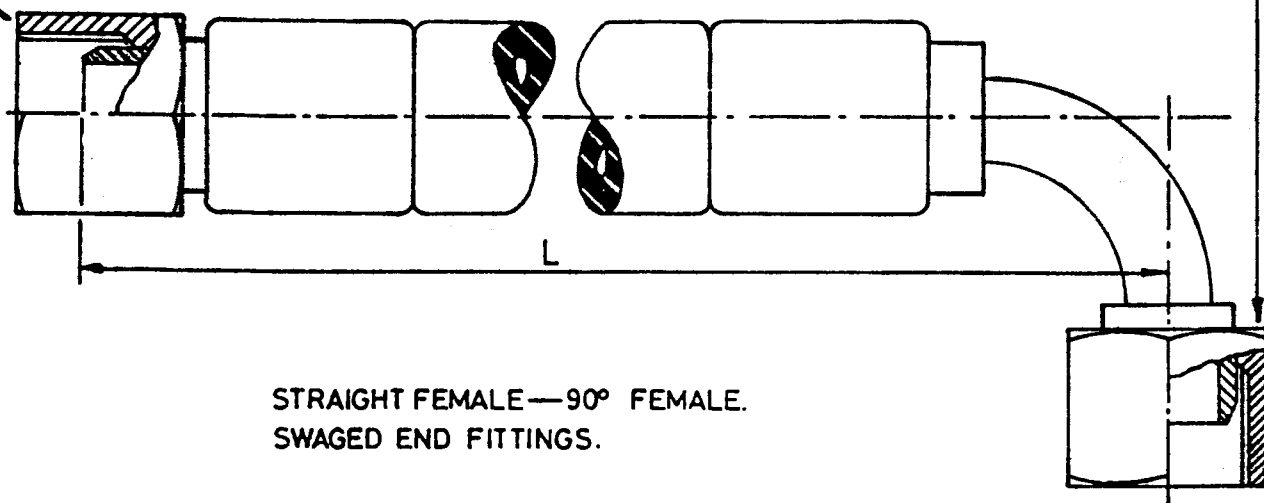
**TYPE P
RUBBER HOSE
31.8mm BORE**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

Scale	A		
Drawing No M-A3-9022959			
Drawn Traced	Checked	Date	
T.R.			8/83

3/4" B.S.P

3/4" B.S.P



STRAIGHT FEMALE—90° FEMALE.
SWAGED END FITTINGS.

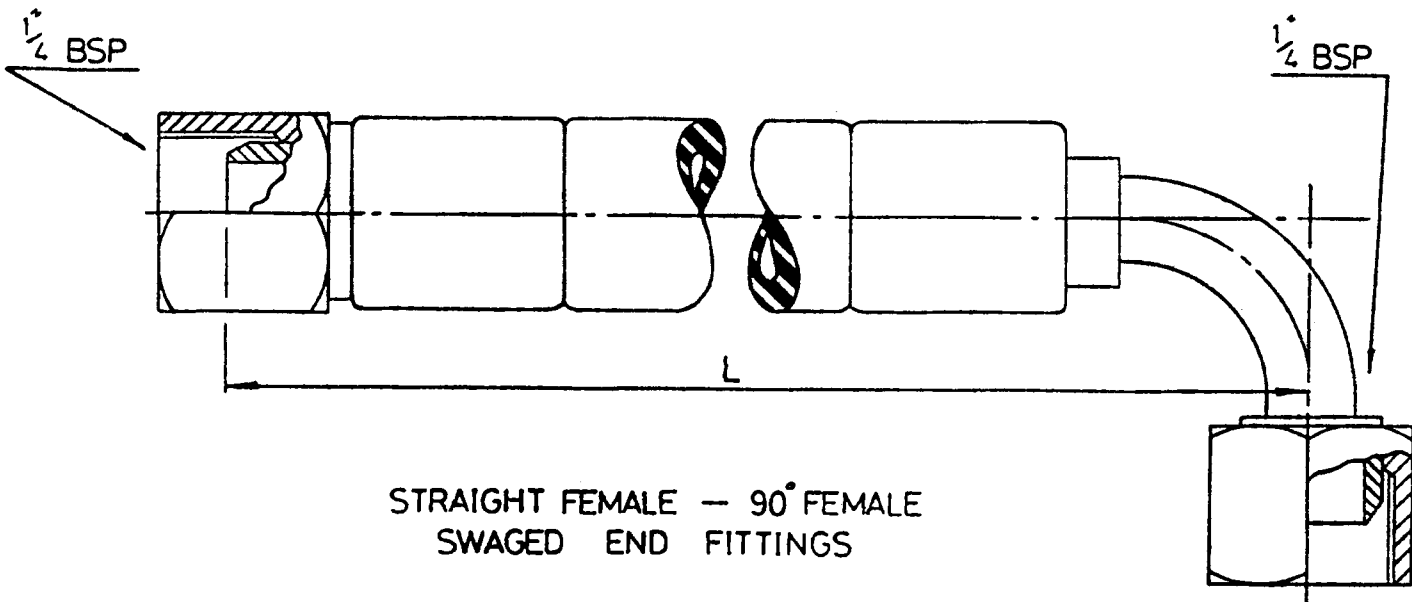
ISSUE LETTER	ALTERATION	DATE
A	FIRST ISSUE	MVE
B	ITEMS 02-04 ADDED	MVE

ITEM NO	LENGTH L-mm	HOSE DATA				BR CAT NUMBER	VEHICLE/ CLASS
		S.A.E.	B.S.S.	WORKING PRESSURE	TEMPERATURE °C			REINFORCED BY
01	400	100R2-A	3832-B2	155	-40 TO +93	—	RB 002 & 004
02	1050	"	"	"	"	15/78539	150/1
03	1500	100R10-A	4506-2	400	"	4SPIRALHEAVY	150/1
04	900	"	"	"	"	15/78541	150/1

**TYPE P
RUBBER HOSE
19 mm. BORE.**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

Scale	A	B		
Drawing No M-A3-9025674				
Drawn Traced M.J.G			Checked Date 9-2-84	



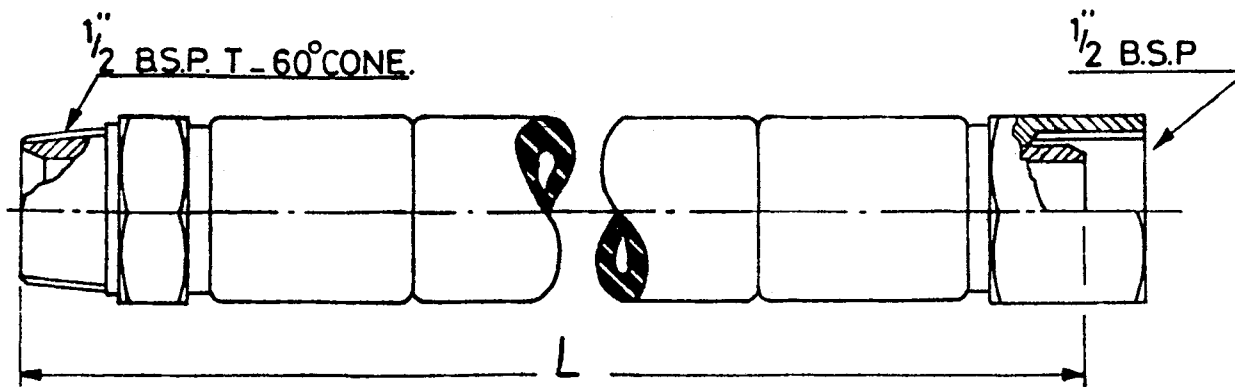
ISSUE LETTER	ALTERATION	ISSUE DATE	DATE
A	FIRST ISSUE	R	7/84
B	ITEM 02 ADDED	R	9/85

ITEM No	LENGTH L mm	HOSE DATA					BR CAT. NUMBER	VEHICLE/CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMP °C	REINFORCED BY		
		SAE	BSS					
01	500	100R1-A	3832-B1	190	-40 TO +93	1 WIRE BRAID	150	
02	275	"	"	"	"	"	15/82494 142	

**TYPE P
RUBBER HOSE
6.4mm BORE**

DIRECTOR OF MECHANICAL
& ELECTRICAL ENGINEERING
BRITISH RAILWAYS BOARD
DESIGN SUPPORT GENERAL
DERBY

Scale	_____	A	B		
Drawing No	M-A3-9028902				
Drawn	Traced	Checked	Date		
R			7/84		



TAPER MALE — STRAIGHT FEMALE
SWAGED END FITTINGS

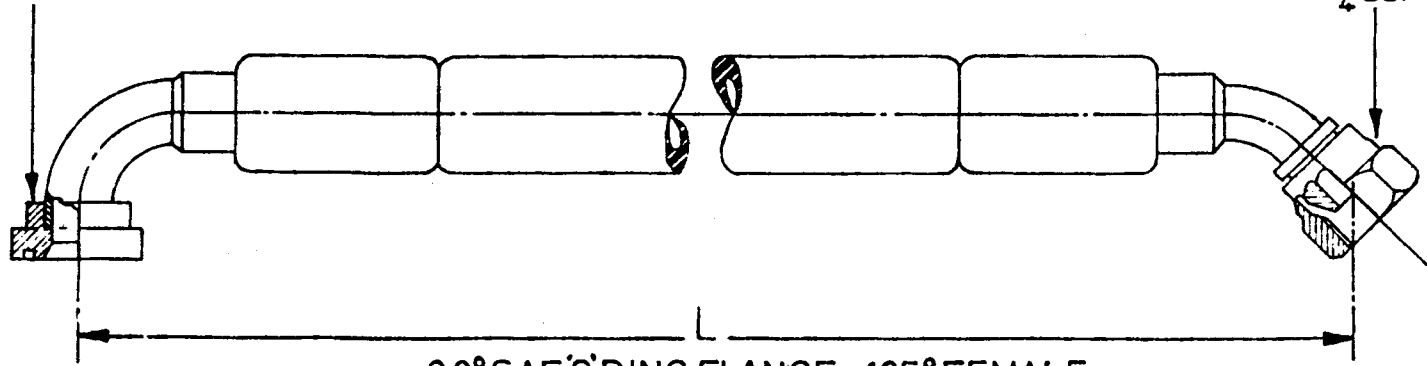
ISSUE LETTER	ALTERATION	DRAWN'S INITIALS	DATE
A	FIRST ISSUE	M.J.G.	2/8/84

ITEM No	LENGTH L. mm	HOSE DATA					BR. CAT NUMBER.	VEHICLE / CLASS.
		SPECIFICATION		WORKING PRES. BAR	TEMP °C	REINFORCED BY		
		S.A.E	B.S.S					
01	690	100R1-A	3832-B1	190	-40 to +93	1 WIREBRAID	98/7531	455
Scale _____ A Drawing No. M-A3-9028981 Drawn Traced Checked Date M.J.G. _____ 2.8.84								

TYPE P
RUBBER HOSE
12.7 mm BORE.

DIRECTOR OF MECHANICAL & ELECTRICAL ENGINEERING
BRITISH RAILWAYS BOARD.
DESIGN SUPPORT-GENERAL
DERBY.

FLANGE TO SAE J 518C
STANDARD PRESSURE SERIES



90° SAE O'RING FLANGE - 135° FEMALE
SWAGED END FITTINGS

ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH
THE COUPLING FURTHEST FROM THE EYE AT ZERO.

ISSUE LETTER	ALTERATION		DRAWN INITIALS	DATE
	A	FIRST ISSUE				984

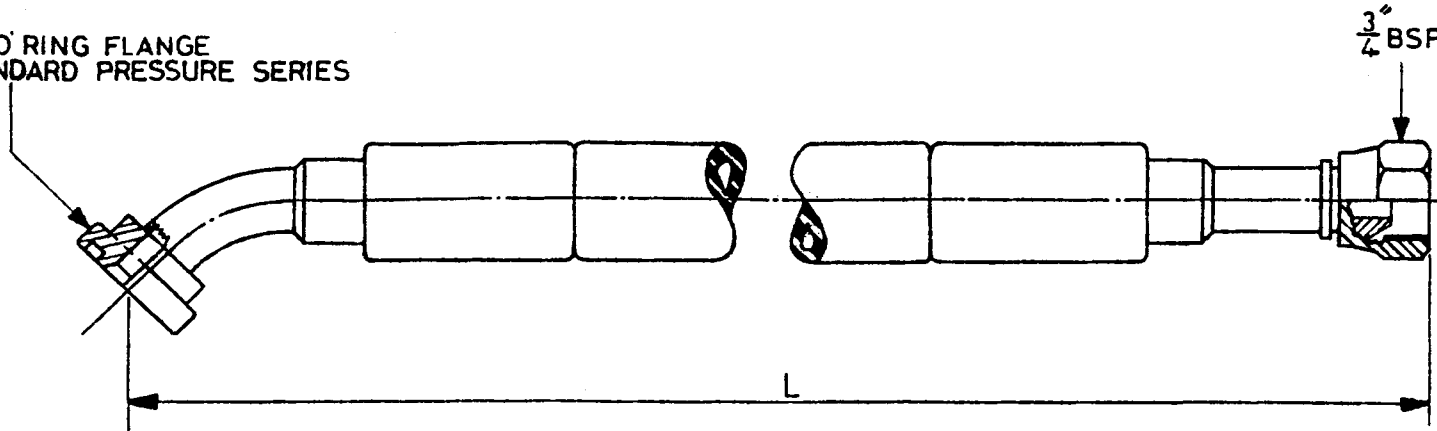
ITEM No	LENGTH Lmm	HOSE DATA					ANGULAR RELATION	HOSE ASSY WORKING PRESSURE	BR CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	BSS	WORKING PRESSBAR	TEMP. °C	REINFORCED BY				
01	750	100 R2-A	3832 -B2	155	-40to.93	2 WIRE BRAID	0°	155	61/42173	47

TYPE 'P'
RUBBER HOSE
19 mm BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
DESIGN SUPPORT GENERAL

Scale	___	A		
Drawing No	M-A3-9028984			
Drawn	Traced	Checked	Date	
P.S.G.	---			11/80

SAE O RING FLANGE
STANDARD PRESSURE SERIES



135° SAE O RING FLANGE — STRAIGHT FEMALE
SWAGED END FITTINGS
ANGULAR RELATION OF END IS MEASURED CLOCKWISE WITH THE
COUPLING FURTHEST FROM THE EYE AT ZERO

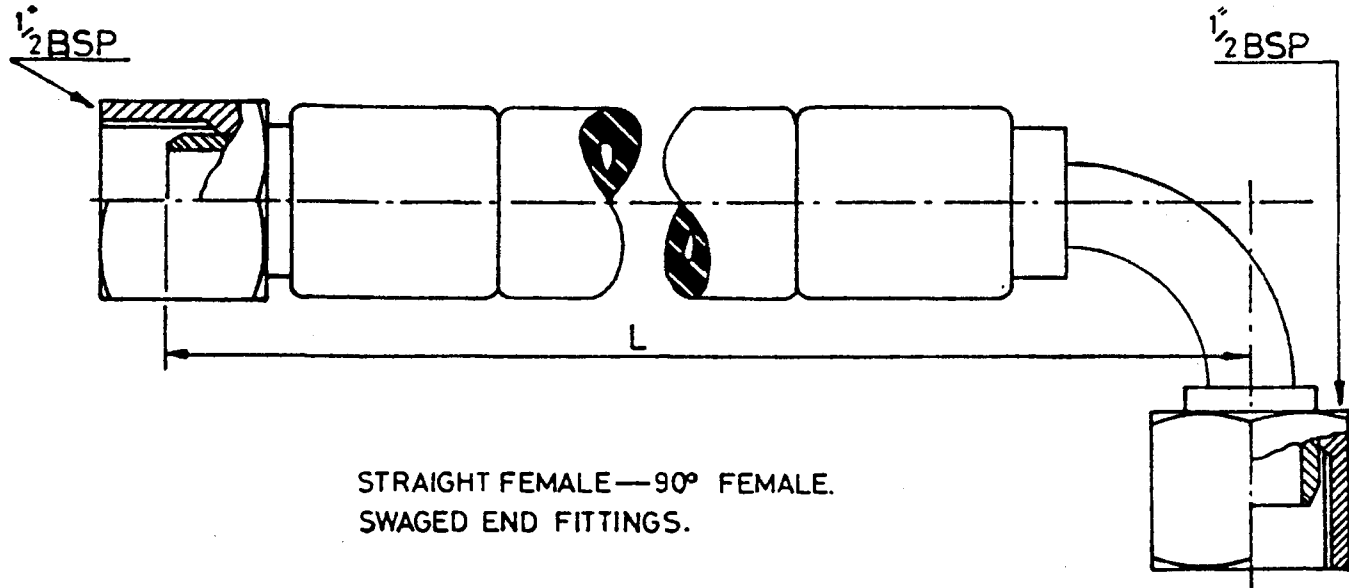
ISSUE LETTER	ALTERATION	ISSUE NUMBER	DATE
A	FIRST ISSUE	1	1/84

ITEM No.	LENGTH L mm.	HOSE DATA				ANGULAR RELATION	HOSE ASSY. WORKING PRESSURE	B.R. CAT. NUMBER	VEHICLE / CLASS
		SAE SPECIFICATION	BSS SPECIFICATION	WORKING PRESSURE BAR	TEMP. °C					REINFORCED BY
01	750	100 R1-A	3832-B1	86	-40 to +93	1 WIRE BRAID	90°	86 BAR	61/42174 47

TYPE 'P'
RUBBER HOSE
19 mm BORE

DIRECTOR OF MECHANICAL & ELECTRICAL ENGINEERING
BRITISH RAILWAYS BOARD
DESIGN SUPPORT GENERAL
DERBY

Scale		A			
Drawing No.	M-A3-9028985				
Drawn	Traced	Check			it
T.D.K.					8



STRAIGHT FEMALE—90° FEMALE.
SWAGED END FITTINGS.

ITEM NO	LENGTH L-mm	HOSE DATA					BR CAT NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESSBAR	TEMPERATURE °C	REINFORCED BY		
		S.A.E.	B.S.S.					
01	660	100R2-A	3832-B2	241	-40 TO+93	2 WIRE BRAID	17/1094	08.09

ALTERATION

ISSUE LETTER: A FIRST ISSUE

MF

**TYPE P
RUBBER HOSE
12.7mm BORE.**

DIRECTOR OF MECHANICAL & ELECTRICAL ENGINEERING.
BRITISH RAILWAYS BOARD.
DESIGN SUPPORT GENERAL
DERBY

Scale	A			
Drawing NO	M-A3-9029040			
Drawn	Traced	Checked	Date	
'R			8/84	

SECTION 2

STANDARD REUSABLE END FITTED HOSE ASSEMBLIES

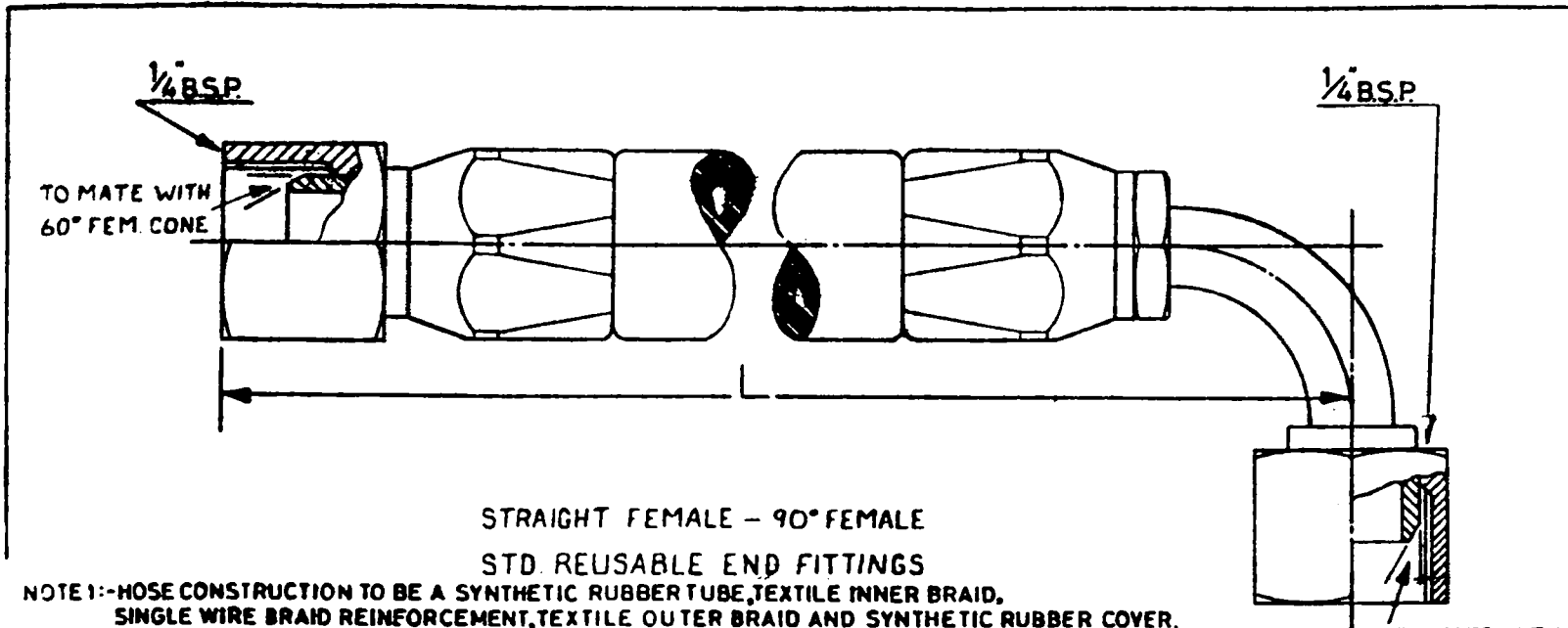
SIZES		TYPE OF END FITTINGS											ISSUE LETTER	ALTERATION	DATE		
BSP	HOSE BORE mm	STRAIGHT FEMALE	STRAIGHT FEMALE	STRAIGHT FEMALE	135° FEMALE	STRAIGHT FEMALE	135° FEMALE	STRAIGHT FEMALE	90° FEMALE	LP 135° SAE FLANGE LP 135° SAE FLANGE	HD STRAIGHT STANDPIPE PARALLEL MALE.	90° FEMALE					
1/4	4.9												A	NEW DRG No ADDED.			
1/4	6.4		M-A3-9001928	M-A3-9001929	M-A3-9001930								B	DR G. Nos M-A3-9001936 & M-A3-9001945 ADDED.			
3/8	7.9	M-A3-9001931	M-A3-9001932										C	DRG. No. M-A3-9001961 ADDED.			
3/8	9.7					M-A3-9001935							D	DRG. No. M-A3-9001939 ADDED.			
1/2	10.4	M-A3-9001936	M-A3-9001937	M-A3-9001938	M-A3-9001939								E	DRG. No. M-A3-9001929, 9001930 & 9001951 ADDED.			
1/2	12.7												F	DRG. No. M-A3-9001943 & 9001944 ADDED.			
5/8	12.7												G	DRG. No. M-A3-9014745 ADDED.			
5/8	15.7												H	DRG. No. M-A3-9022876 ADDED.			
3/4	15.8	M-A3-9001940	M-A3-9001941	M-A3-9001942	M-A3-9001943							M-A3-9029184	J	DRG No M-A3-9025959 ADDED.			
3/4	19.1												K	DRG No M-A3-9029184 ADDED.			
1	22.4	M-A3-9001944	M-A3-9001945	M-A3-9001946	M-A3-9001947				M-A3-9002220				L	M-A3-9014745 DELETED			
1	25.4												FORMERLY BR DRG. No. G-A3-1004				
1 1/4	28.5	M-A3-9001948	M-A3-9001949	M-A3-9001950	M-A3-9001951			M-A3-9001952		M-A3-9022876		M-A3-9025959					
1 1/4	31.8								M-A3-9001953				INDEX TO 'P' TYPE HOSE ASSEMBLIES WITH STD. REUSABLE END FITTINGS				
1 1/2	35.1		M-A3-9001955														
1 1/2	38.1												CHIEF MECHANICAL & ELECTRICAL ENGINEER BRITISH RAILWAYS BOARD STANDARDS & RATIONALIZATION DERBY				
2	46.0	M-A3-9001958	M-A3-9001959														
2	50.8												Scale				
2 1/2	60.5	M-A3-9001961															A	B	C	D	E
													F	G	H	J	K
													Drawing No M-A3-9001925 L				
													Drawn P.S.G.				

SIZES			TYPE OF END FITTINGS											ISSUE LETTER	ALTERATION		DRAWN'S INITIALS	DATE	
BSP.	HOSE BORE mm	LP 90° SAE FLANGE LP STRAIGHT SAE FLANGE														A			FIRST ISSUE	'R	'64
1/4	4.9																		
1/4	6.4																		
3/8	7.9																		
3/8	9.7																		
1/2	10.4																		
1/2	12.7																		
5/8	12.7																		
5/8	15.7																		
3/4	15.8																		
3/4	19.1																		
1	22.4																		
1	25.4																		
1 1/2	28.5	M-A3-9029107																	
1 1/2	31.8																		
1 1/2	35.1																		
1 1/2	38.1																		
2	46.0																		
2	50.8																		
2 1/2	60.5																		

INDEX
TO 'P' TYPE HOSE
ASSEMBLIES WITH
STD. REUSABLE END FITTINGS

DIRECTOR OF MECHANICAL
& ELECTRICAL ENGINEERING.
BRITISH RAILWAYS BOARD.
DESIGN SUPPORT-GENERAL.
DERBY.

Scale		A		
Drawng No.	M-A3-9001926			
Drawn	IT	Checked		Date
'R.				'64



STRAIGHT FEMALE - 90° FEMALE
STD. REUSABLE END FITTINGS

NOTE 1:--HOSE CONSTRUCTION TO BE A SYNTHETIC RUBBER TUBE, TEXTILE INNER BRAID, SINGLE WIRE BRAID REINFORCEMENT, TEXTILE OUTER BRAID AND SYNTHETIC RUBBER COVER.

TO MATE WITH
60° FEM. CONE

ISSUE LETTER	ALTERATION		DATE
	INITIALS		
A	NEW DRG. No. ADDED.		
B	ITEM 02 ADDED.		
C	ITEMS 01 & 02 SAE SPEC. ADDED.		

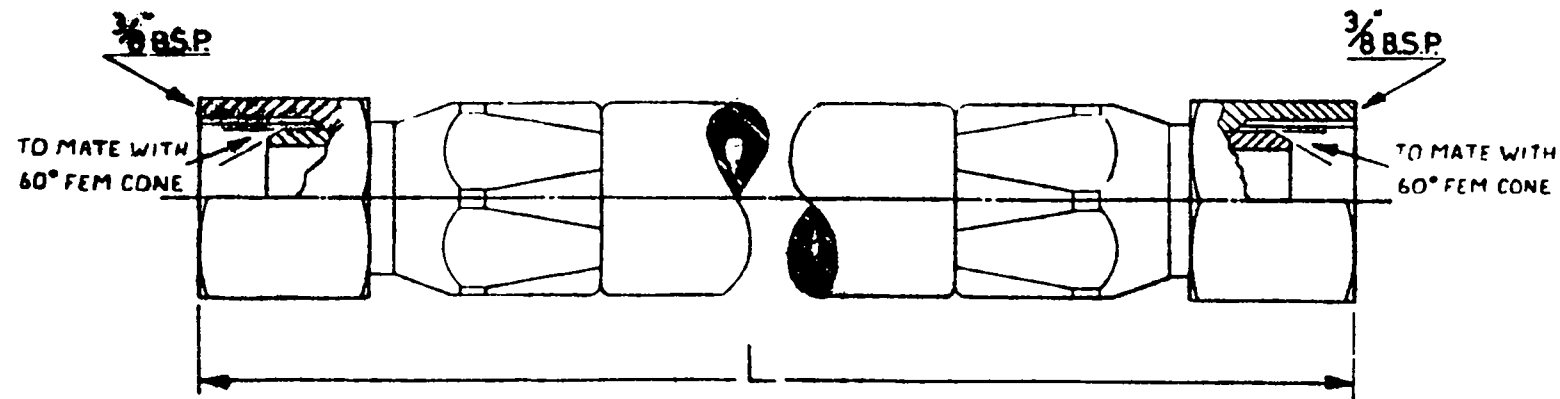
ITEM No.	LENGTH L mm	HOSE DATA						B.R. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMP °C	REINFORCED BY	MIN. BEND RADIUS mm		
		SAE	BSS						
01	505	100R5	→	210	-40 to +93	SEE NOTE 1	85	72/822	253254,
02	1075	-	→	-	-	-	-	51/87014	50,

FORMERLY BR DRG. No.
G-A3-1020

TYPE 'P' RUBBER HOSE
6.4 mm BORE
WITH REUSABLE FITTINGS

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale		A	B	C
Drawing No	M-A3-9001928			
Drawn Traced Checked	PSG			
	-	KA		6/80



STRAIGHT FEMALE - STRAIGHT FEMALE
STD REUSABLE END FITTINGS

NOTE 1:- HOSE CONSTRUCTION TO BE A SYNTHETIC RUBBER TUBE, TEXTILE INNER BRAID,
SINGLE WIRE BRAID REINFORCEMENT, TEXTILE OUTER BRAID AND SYNTHETIC RUBBER COVER.

ITEM No	LENGTH Lmm	HOSE DATA						BR CAT NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMP °C	REINFORCED BY	MIN BEND RAD. mm		
		SAE	BSS						
01	370	100R5	——	160	-40 TO +93	SEE NOTE 1	100	72/814	253254, FORMERLY BR DRG.No. G-A3-1019
02	385	"	——	"	" " "	" " "	"	72/815	253254, TYPE P RUBBER HOSE
03	395	"	——	"	" " "	" " "	"	72/816	253254, 7.9mm BORE
04	3500	"	——	"	" " "	" " "	"	——	WITH REUSABLE FITTINGS LUL 1988

ISSUE LETTER	ALTERATION	DATE
A	NEW DRG No ADDED	2/70
B	ITEMS 01-03 SAE SPEC ADDED	1/71
C	ITEM 04 ADDED	5/72

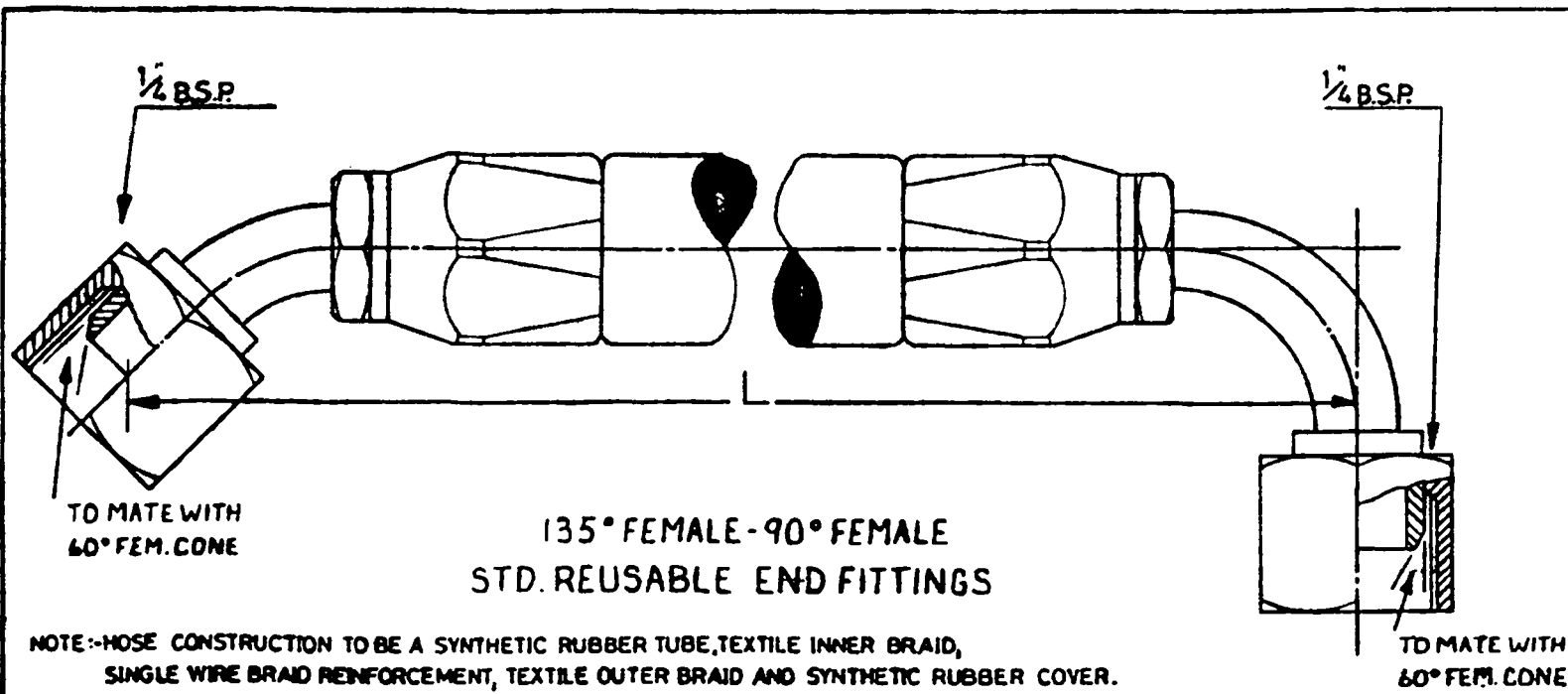
CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale _____ A B C

Drawing No
M-A3-9001931

Drawn Traced Checked Date
PSG — KA 6/80

BR 9001931



ISSUE LETTER	ALTERATION	INITIALS	DATE
A	FIRST ISSUE		
B	ITEM 01 SAE SPEC. ADDED		
C	ITEM 01 CLASS 142 ADDED		

ITEM No	LENGTH Lmm	HOSE DATA						ANGULAR RELATION	B.R CAT. NUMBER	VEHICLE/ CLASS
		SPECIFICATION		WORKING PRESS.	TEMP. °C	REINFORCED BY	MIN. BEND RADIUS mm			
		SAE	BSS	BAR						
01	710	100R5	—	210	-40 to +93	SEE NOTE 1	85	0°	51/87017	50,142

TYPE 'P' RUBBER HOSE
6.4 mm BORE
WITH REUSABLE FITTINGS

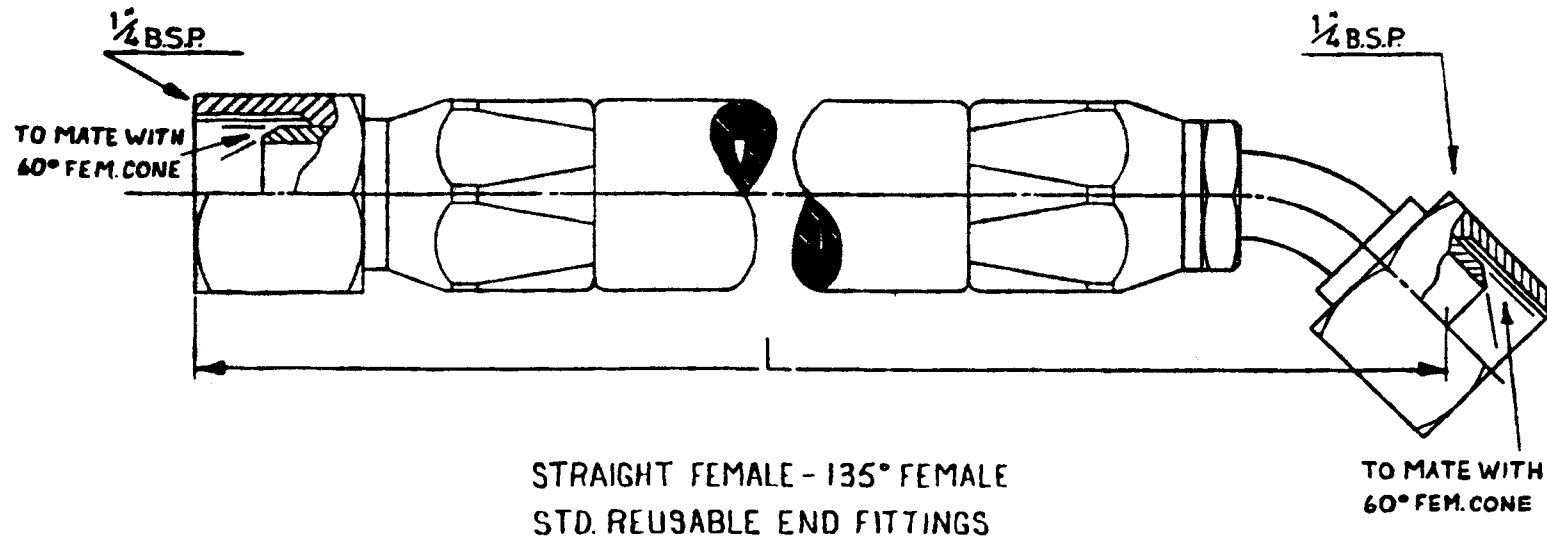
CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale _____ A B C

Drawing No
M-A3-9001930

Drawn/Traced _____
PSG

Checked _____
KA 11/81



STRAIGHT FEMALE - 135° FEMALE
STD. REUSABLE END FITTINGS

NOTE 1-HOSE CONSTRUCTION TO BE A SYNTHETIC RUBBER TUBE, TEXTILE INNER BRAID,
SINGLE WIRE BRAID REINFORCEMENT, TEXTILE OUTER BRAID AND SYNTHETIC RUBBER COVER.

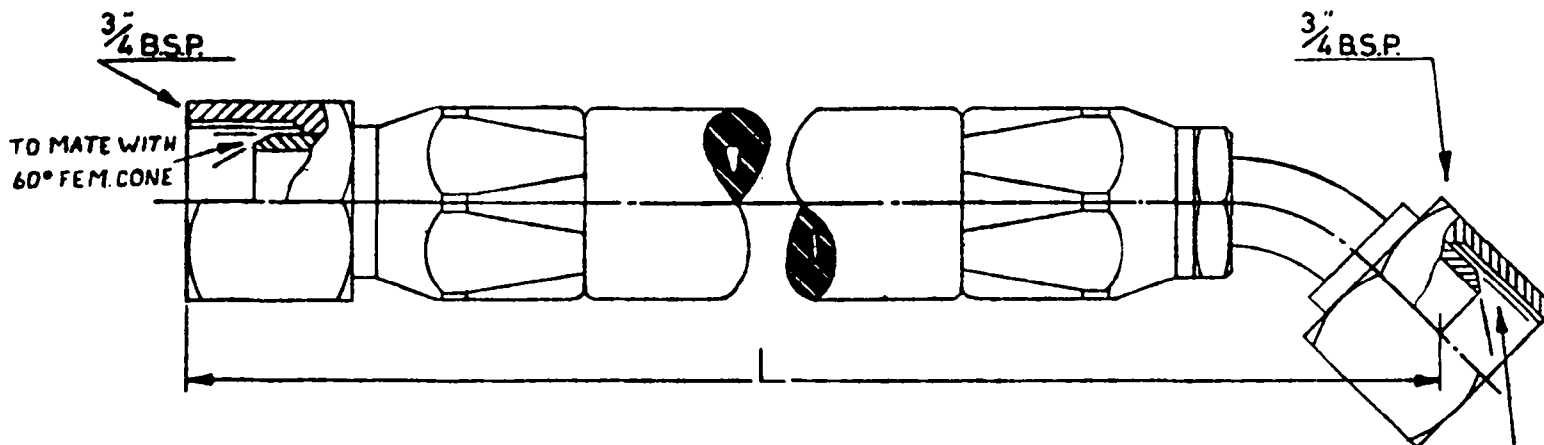
ISSUE LETTER	ALTERATION	INITIALS	DATE
A	FIRST ISSUE.		
B	ITEM 01 CLASS 73 ADDED		
C	ITEMS 01&02 SAE SPEC. ADDED		

ITEM No.	LENGTH L _{max}	HOSE DATA				B.R. CAT. NUMBER	VEHICLE/ CLASS
		SPECIFICATION		WORKING	TEMP.			REINFORCED	MIN. BEND
		SAE	BSS	PRESS-BAR	°C	BY	RADIUS _{mm}
01	695	100R5	—	210	-40 TO +93	SEE NOTE 1	85
02	545	"	—	"	"	"	"

TYPE 'P' RUBBER HOSE
6.4 mm BORE
WITH REUSABLE FITTINGS

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

Scale	A	B	C
Drawing No MA3-9001929			
Drawn	Traced	Checked	Date
P.S.G	-	BA	10/81



**STRAIGHT FEMALE - 135° FEMALE
STD. REUSABLE END FITTINGS**

**NOTE 1 :- HOSE CONSTRUCTION TO BE A SYNTHETIC RUBBER TUBE, TEXTILE INNER BRAID,
SINGLE WIRE BRAID REINFORCEMENT, TEXTILE OUTER BRAID AND SYNTHETIC RUBBER COVER.**

ISSUE LETTER	ALTERATION	DATE
A	NEW DRG No ADDED.	
B	ITEM 02 ADDED.	
C	ITEMS 03-05 ADDED.	
D	ITEMS 01-05 SAE SPEC. ADDED.	MFC

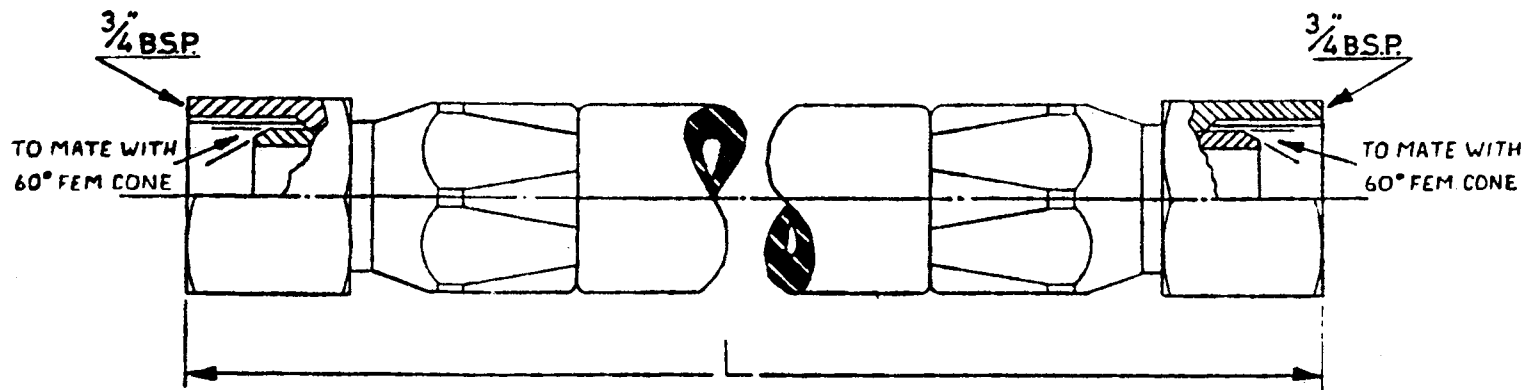
ITEM No.	LENGTH L mm	HOSE DATA						B.R. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS.	TEMP. °C	REINFORCED BY	MIN. BEND RADIUS mm		
		SAE	BSS	BAR					
01	450	100R5	---	105	-40 to +93	SEE NOTE 1	165	72/4569	58.
02	790	-	---	-	-	-	-	72/4596	58.
03	400	-	---	-	-	-	-	51/87019	50.
04	920	-	---	-	-	-	-	51/87020	50.
05	1040	-	---	-	-	-	-	51/87021	50.

FORMERLY BR DRG. No.
G-A3-1012

TYPE 'P' RUBBER HOSE
15.8 mm BORE
WITH REUSABLE FITTINGS

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	A3	7
Drawing No	M-A3-9001942	
Drawn	Traced	Checked Date
PSG	—	K.A. 5/80



STRAIGHT FEMALE - STRAIGHT FEMALE
 STD. REUSABLE END FITTINGS

NOTE 1:- HOSE CONSTRUCTION TO BE A SYNTHETIC RUBBER TUBE, TEXTILE INNER BRAID,
 SINGLE WIRE BRAID REINFORCEMENT, TEXTILE OUTER BRAID AND SYNTHETIC RUBBER COVER.

ISSUE LETTER	ALTERATION	INITIALS	DATE
A	NEW DRG No ADDED.		7/80
B	ITEMS 04 & 05 ADDED.		7/80
C	ITEM 06 ADDED.		7/80
D	ITEM 01-06 SAE SPEC. ADDED.	MJE	7/80
E	ITEM 01 DELETED		7/80

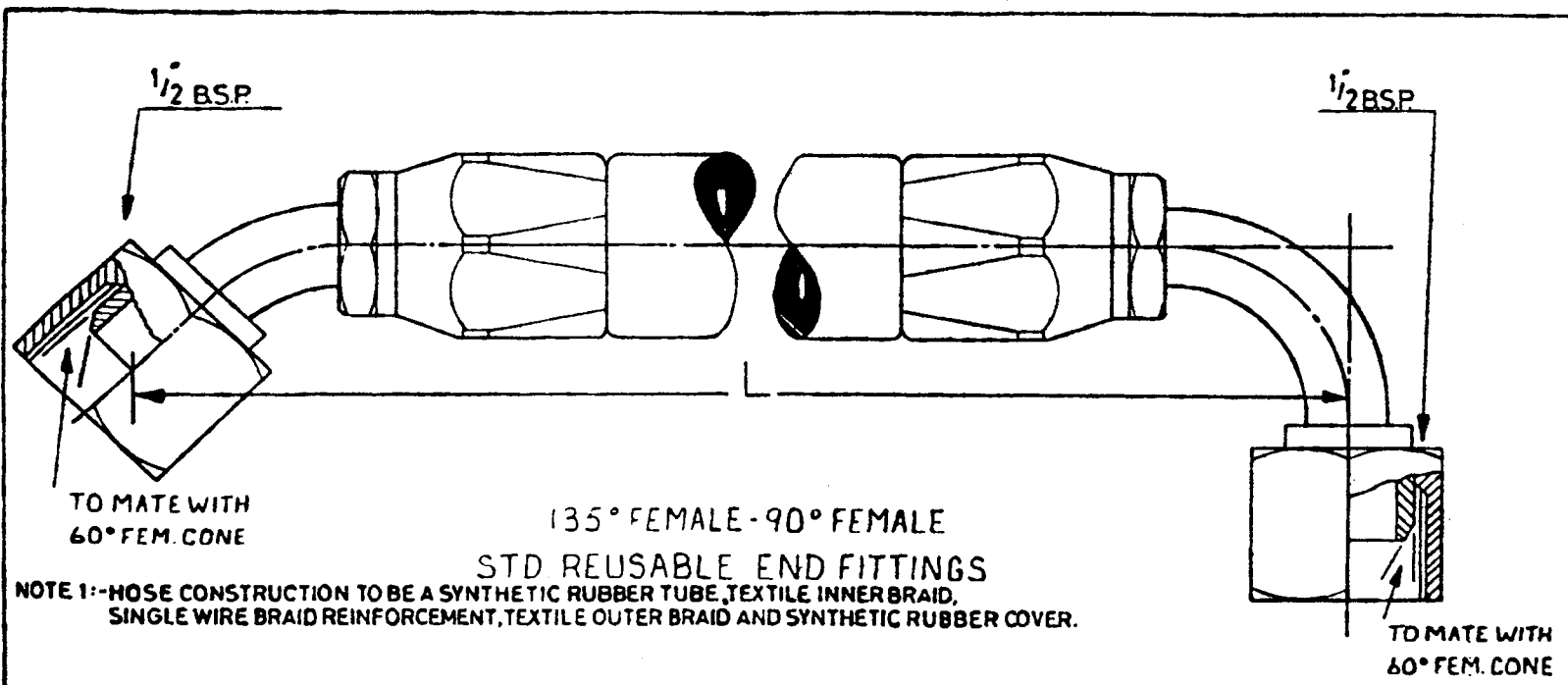
ITEM No	LENGTH Lmm	HOSE DATA						B.R. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS-BAR	TEMP °C	REINFORCED BY	MIN. BEND RADIUS mm		
		SAE	BSS						
01	.								
02	340	100 R5	---	105	-40 TO +93	SEE NOTE 1	165	72/812 253,254,	
03	1000	-	---	"	" . . .	" . . .	"	72/4568 58,	
04	680	-	---	"	" . . .	" . . .	"	72/5501 58.	
05	470	"	---	"	" . . .	" . . .	"	72/5502 58.	
06	380	-	---	"	" . . .	" . . .	"	51/87018 50.	

FORMERLY BR DRG.No.
 G-A3-1009

TYPE 'P' RUBBER HOSE
 15.8mm BORE
 WITH REUSABLE FITTINGS

CHIEF MECHANICAL &
 ELECTRICAL ENGINEER
 BRITISH RAILWAYS BOARD
 STANDARDS & RATIONALIZATION
 DERBY

Scale	A	B	C	D	E
Drawing No	M-A3-9001940				
Drawn	Traced	Checked	Date		
PSG	-		JK	3/80	



NOTE 1:-HOSE CONSTRUCTION TO BE A SYNTHETIC RUBBER TUBE, TEXTILE INNER BRAID, SINGLE WIRE BRAID REINFORCEMENT, TEXTILE OUTER BRAID AND SYNTHETIC RUBBER COVER.

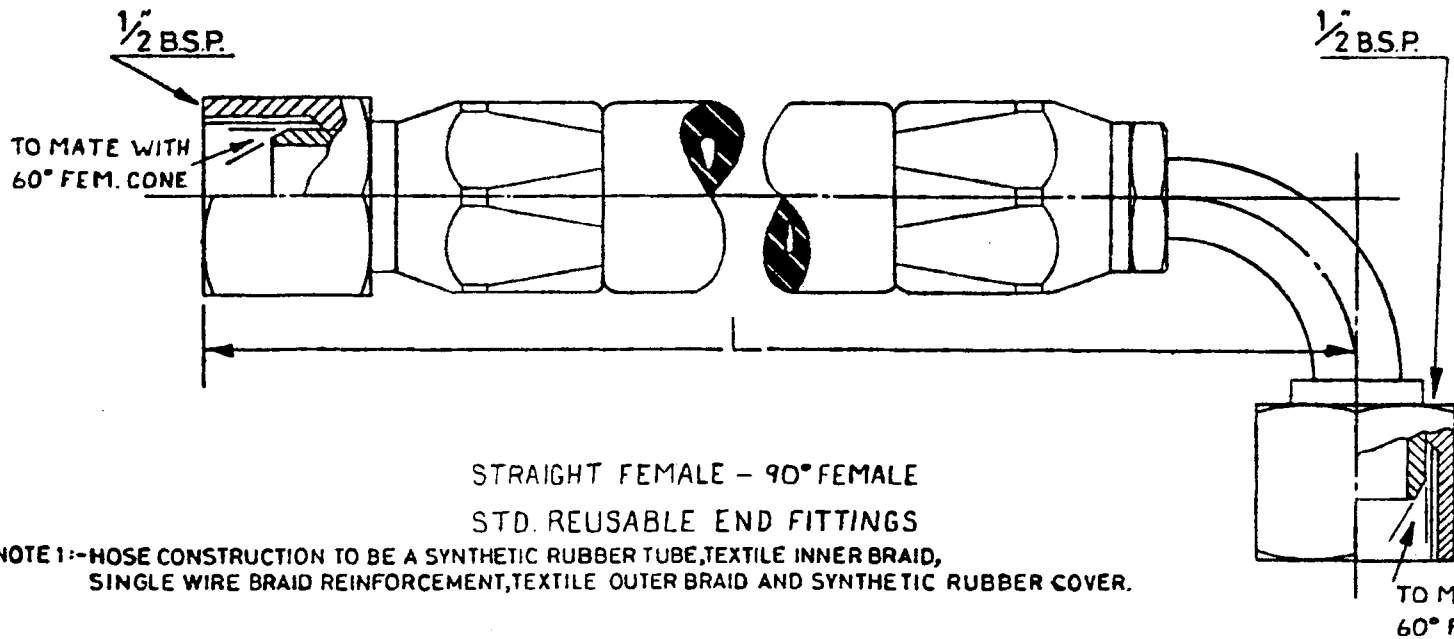
ISSUE LETTER	ALTERATION	DATE
A	FIRST ISSUE	10/81
B	ITEM 01 ANGLE WAS 270°	10/81
C	ITEM 01 SAE SPEC ADDED	10/81

ITEM No	LENGTH Lmm	HOSE DATA					REINFORCED BY	MIN BEND RADIUS mm	ANGULAR RELATION	B.R. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	BSS	WORKING PRESS. BAR	TEMP °C						
01	460	100R5	—	140	-40 to +93	SEE NOTE 1	120	90°	72/5535	58.	

TYPE 'P' RUBBER HOSE
10.4 mm BORE
WITH REUSABLE FITTINGS

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
MATERIALS & COMPONENTS STANDARDS SECTION

Scale	A	B	C
Drawing No M-A3-9001939			
Drawn	Traced	Checked	Date
PSG	—	PSG	8/81



STRAIGHT FEMALE - 90° FEMALE
STD. REUSABLE END FITTINGS

NOTE 1:--HOSE CONSTRUCTION TO BE A SYNTHETIC RUBBER TUBE, TEXTILE INNER BRAID, SINGLE WIRE BRAID REINFORCEMENT, TEXTILE OUTER BRAID AND SYNTHETIC RUBBER COVER.

ISSUE LETTER	ALTERATION	ISSUED BY	DATE
A	NEW DRG No ADDED -	PSG	7/80
B	ITEMS 03-06 ADDED	PSG	7/80
C	ITEM 07 ADDED	PSG	7/80
D	ITEMS 01-07 SAE SPEC. ADDED	PSG	7/80
E	ITEM 06 CLASS 37 ADDED	PSG	7/80
F	ITEM 08 ADDED	PSG	7/80
G	ITEMS 03 & 08 CLASS 142 ADDED	PSG	7/80
H	ITEM 07 DELETED	PSG	7/80

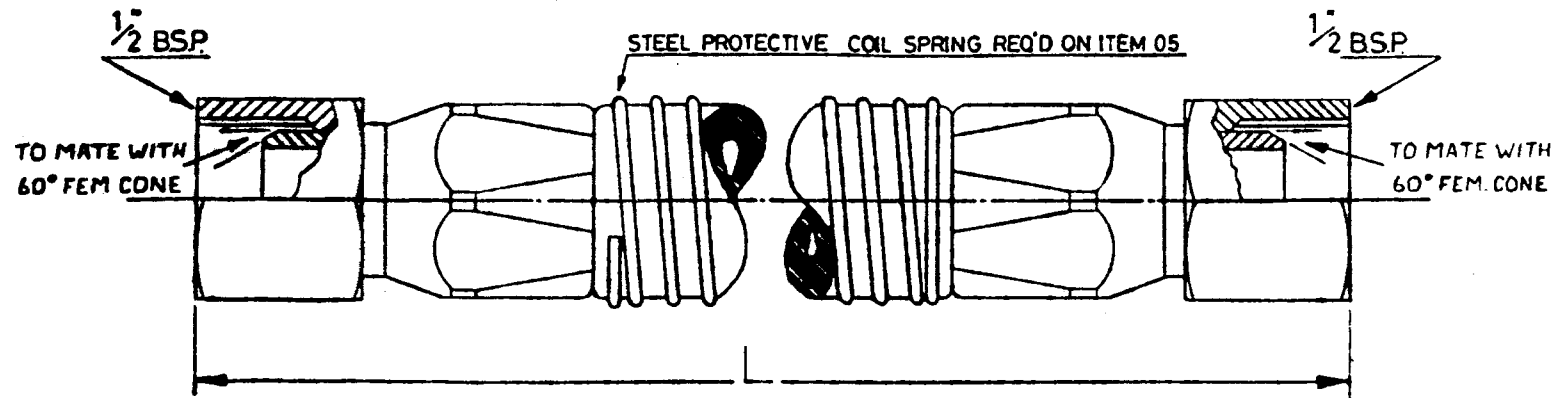
FORMERLY BR DRG. No. G-A3-1007

TYPE 'P' RUBBER HOSE
10.4 mm BORE
WITH REUSABLE FITTINGS

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	A	B	C	D	E
Drawing No M-A3-9001937	F	G	H		
Drawn	Traced	Checked	Date		
PSG	-	PSG	PSG	PSG	3/80

ITEM No.	LENGTH L m m	HOSE DATA						B.R. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMP. °C	REINFORCED BY	MIN. BEND RADIUS m m		
		SAE	BSS						
01	320	100R5	---	140	-40to+93	SEE NOTE 1	120	72/4559	58.
02	525	"	---	"	" "	" "	"	72/4567	58.
03	740	"	---	"	" "	" "	"	72/4597	58.142
04	560	"	---	"	" "	" "	"	72/4598	58.
05	580	"	---	"	" "	" "	"	72/4599	58.
06	500	"	---	"	" "	" "	"	72/5500	58.37.
07									
08	675	"	---	"	" "	" "	"	15/81255	141142



STRAIGHT FEMALE - STRAIGHT FEMALE
STD. REUSABLE END FITTINGS

NOTE 1:- HOSE CONSTRUCTION TO BE A SYNTHETIC RUBBER TUBE, TEXTILE INNER BRAID,
SINGLE WIRE BRAID REINFORCEMENT, TEXTILE OUTER BRAID AND SYNTHETIC RUBBER COVER.

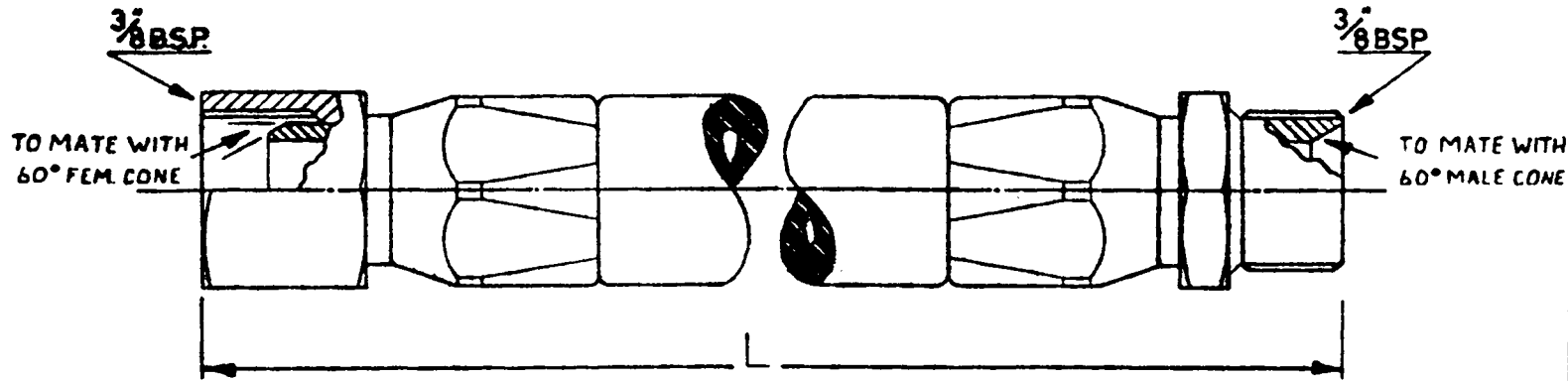
ISSUE LETTER	ALTERATION	ISSUED BY INITIALS	DATE
A	ITEM 03 ADDED		26/7/72
B	ITEMS 01 03 SAE SPEC ADDED ITEM 04 ADDED		26/7/72
C	ITEM 05 AND REF TO PROTECTIVE COIL ADDED	LR	2/8/72
D	ITEM 06 ADDED	LR	2/8/72

ITEM No.	LENGTH L mm	HOSE DATA					REINFORCED BY	MIN. BEND RADIUS mm	B.R. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	BSS	WORKING PRESS-BAR	TEMP. °C					
01	560	100 R5	—	140	-40 TO +93	SEE NOTE 1	120	72/5503	58	
02	730	"	—	"	" " "	" " "	"	72/5504	58	
03	600	"	—	"	" " "	" " "	"	72/5536	58	
04	770	"	—	"	" " "	" " "	"	51/41553	31	
05	440	"	—	"	" " "	" " "	"	—	RB004	
06	700	100 R2	3832 B2	241	" " "	2 WIRE BRAID	125	61/42196	47	

TYPE 'P' RUBBER HOSE
10.4 mm BORE
WITH REUSABLE FITTINGS

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale		A	B	C	D
Drawing No					
M-A3-9001936					
Drawn	Traced	Ch			
PSG	—				



STRAIGHT FEMALE - STRAIGHT MALE
STD REUSABLE END FITTINGS

ISSUE LETTER	ALTERATION	ISSUE NO.	DATE
	A NEW DRG. NO. ADDED		

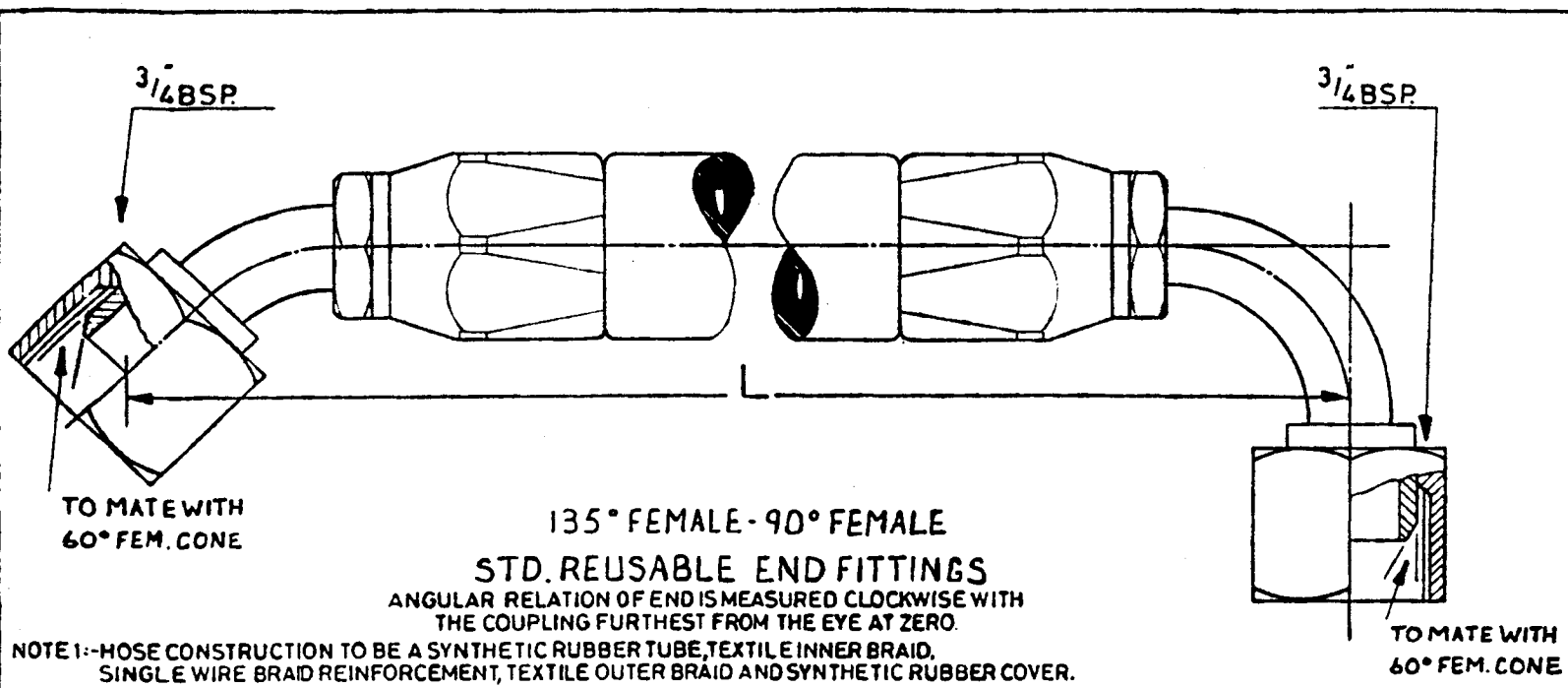
ITEM No.	LENGTH L mm	HOSE DATA						BR CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMP. °C	REINFORCED BY	MIN BEND RADIUS mm		
		SAE	BSS						
01	615	100R2-A	832-B2	350	-40 TO +93	2 WIRE BRAID	125	72/802	253254,

FORMERLY BR DRG. No. 6-A3-1021

TYPE 'P' RUBBER HOSE
9.7 mm BORE
WITH REUSABLE FITTINGS

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	A			
Drawing No	M-A3-9001935			
Drawn	Traced	Checked	Date	
PSG	-	KA	7/80	



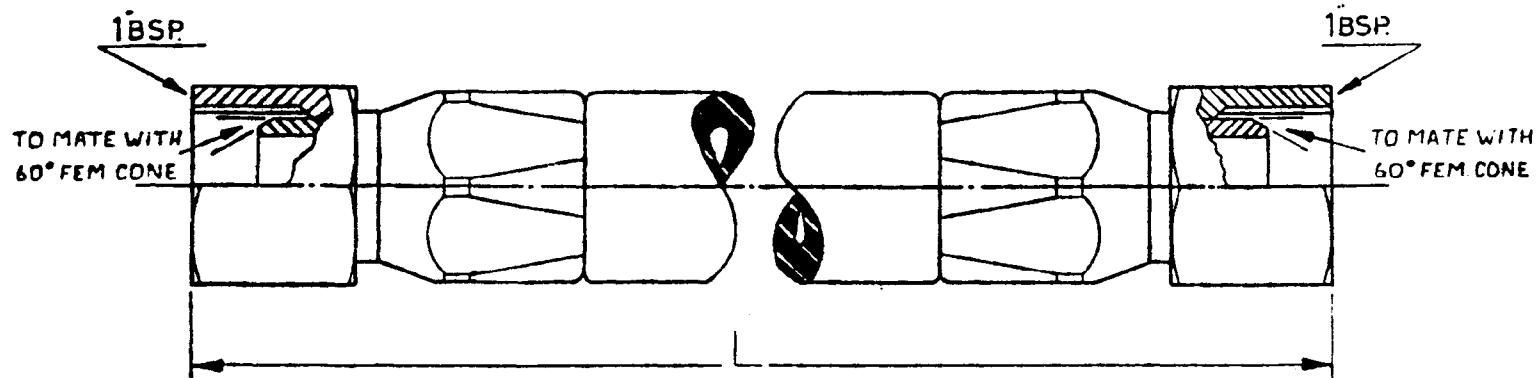
ISSUE LETTER	ALTERATION	ISSUES INITIALS	DATE
A	FIRST ISSUE		24/7/60
B	ITEM 01 SAE SPEC ADDED.		24/7/62
C	ITEM 02 ADDED		20/7/67
D	ITEM 02 DELETED		20/7/67

ITEM No	LENGTH L _{m m}	HOSE DATA					ANGULAR RELATION	B. R CAT NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	BSS	WORKING PRESS-BAR	TEMP °C	REINFORCED BY				MIN BEND RADIUS_{m m}
01	510	100R5	—	105	-40 TO +93	SEE NOTE 1	165	225°	51/87022/50.
02									

TYPE 'P' RUBBER HOSE
15.8_{m m} BORE
WITH REUSABLE FITTINGS

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale		A	B	C	D
Drawing No	M-A3-9001943				
Drawn					
Traced					
Checked					
Date	10/1/67				



STRAIGHT FEMALE - STRAIGHT FEMALE
 STD. REUSABLE END FITTINGS

NOTE 1 :- HOSE CONSTRUCTION TO BE A SYNTHETIC RUBBER TUBE, TEXTILE INNER BRAID,
 SINGLE WIRE BRAID REINFORCEMENT, TEXTILE OUTER BRAID AND SYNTHETIC RUBBER COVER.

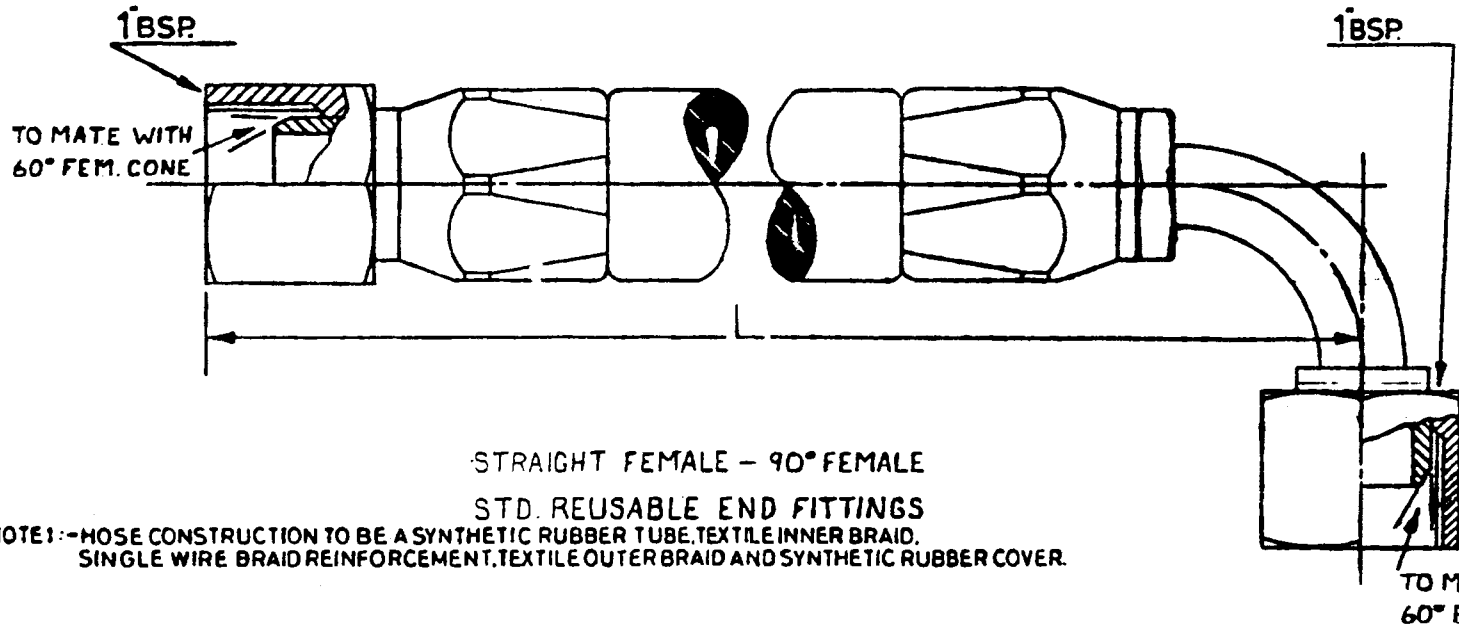
ISSUE LETTER	ALTERATION	ISSUED BY INITIALS	DATE
A	FIRST ISSUE		10/76
B	ITEM 01 SAE SPEC. ADDED.		1/77

ITEM No.	LENGTH L mm	HOSE DATA				REINFORCED BY	MIN. BEND RADIUS mm	B.R. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	WORKING PRESS-BAR	TEMP. °C					
01	340	100R5	55	-40 to +93	SEE NOTE 1	190	51/87023	50.	

TYPE 'P' RUBBER HOSE
 22.4 mm BORE
 WITH REUSABLE FITTINGS

CHIEF MECHANICAL &
 ELECTRICAL ENGINEER
 BRITISH RAILWAYS BOARD
 STANDARDS & RATIONALIZATION
 DERBY

Scale	A	B		
Drawing No M-A3-9001944				
Drawn	Traced	Checked	Date	
P.S.G.	-		10/8	



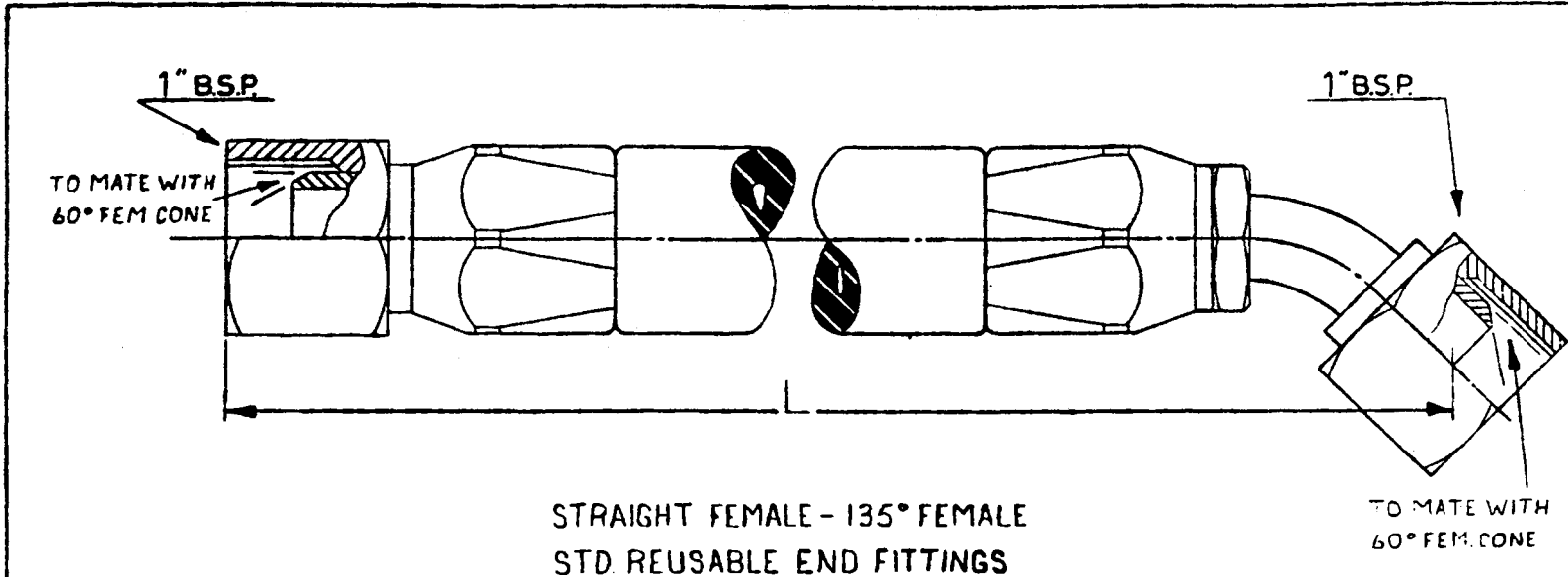
REVISION LETTER	ALTERATION	INITIALS	DATE
A	ITEMS 03&04 ADDED		1/2/80
B	ITEMS 01-04 SAE SPEC. ADDED.		
C	ITEM 03 CLASS 1&2 ADDED		

ITEM No.	LENGTH L m m	HOSE DATA					B.R. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS-BAR	TEMP. °C	REINFORCED BY			MIN. BEND RADIUS m m
01	630	100 R5	—	55	-40 TO +93	SEE NOTE 1	190	72/550758.
02	750	"	—	"	" " "	" " "	"	72/550858.
03	850	"	—	"	" " "	" " "	"	51/8702450.142
04	500	"	—	"	" " "	" " "	"	51/8702550.

TYPE 'P' RUBBER HOSE
22.4 mm BORE
WITH REUSABLE FITTINGS

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	A	B	C
Drawing No M-A3-9001945			
Drawn/Traced/Checked/Date			
P.S.G.	V.N.		11/80



ISSUE LETTER	ALTERATION	DATE	INITIALS
A	NEW ORG No ADDED.	24/10/00	RA
B	ITEMS 03 & 04 ADDED.	24/10/00	RA
C	ITEMS 01 - 04 SAE SPEC ADDED.		RA

STRAIGHT FEMALE - 135° FEMALE
STD. REUSABLE END FITTINGS

NOTE 1: - HOSE CONSTRUCTION TO BE A SYNTHETIC RUBBER TUBE, TEXTILE INNER BRAID, SINGLE WIRE BRAID REINFORCEMENT, TEXTILE OUTER BRAID AND SYNTHETIC RUBBER COVER.

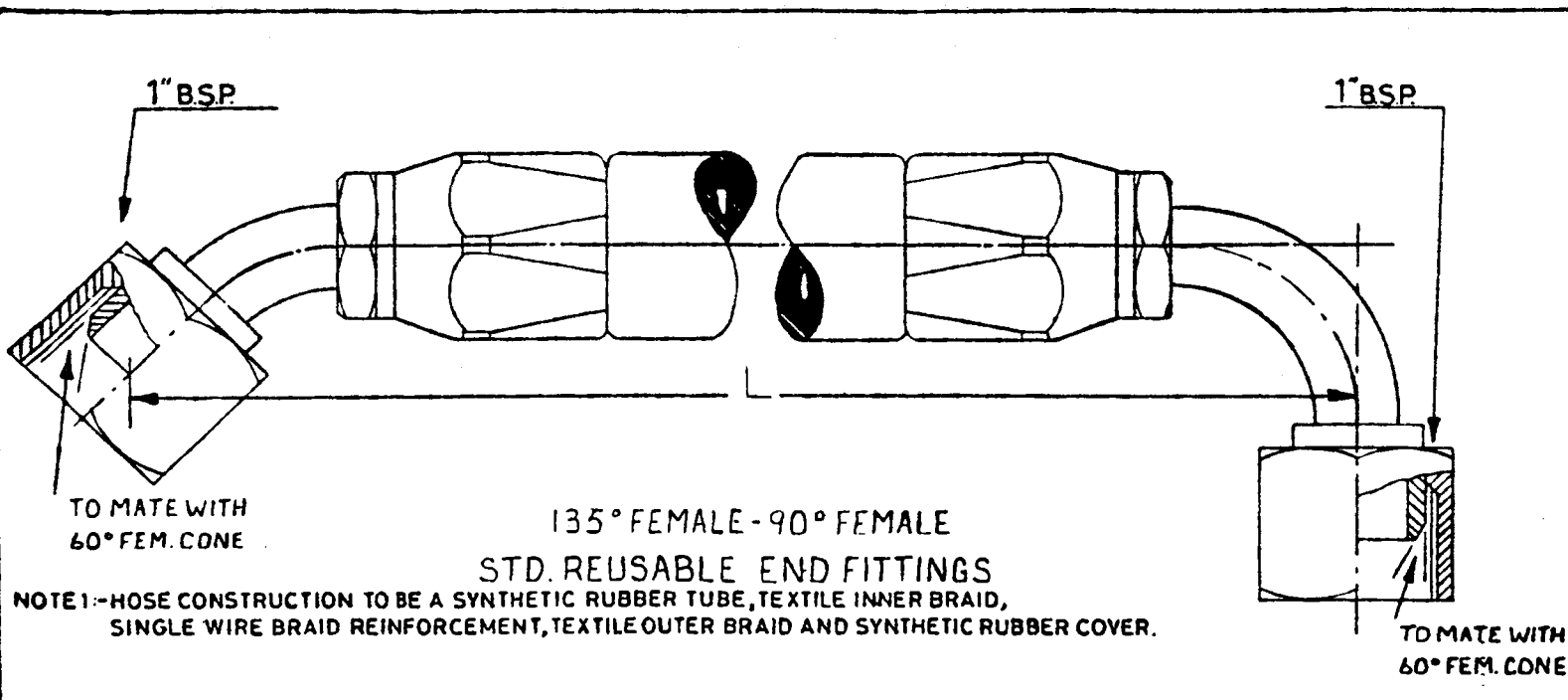
ITEM No.	LENGTH Lmm	HOSE DATA				REINFORCED BY	MIN. BEND RADIUS mm	B.R CAT NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	SPECIFICATION BSS	WORKING PRESS. BAR	TEMP. °C				
01	760	100R5	—	55	-40 to +93	SEE NOTE 1	190	72/4563	58.
02	660	"	—	"	" - -	" - -	"	72/4564	58.
03	710	"	—	"	" - -	" - -	"	51/87026	50.
04	790	"	—	"	" - -	" - -	"	51/87027	50.

FORMERLY BR DRG. No. G-A3-1011

TYPE 'P' RUBBER HOSE
22.4 mm BORE
WITH REUSABLE FITTINGS

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale		A	B	C
Drawing No	M-A3-9001946			
Drawn	Traced	Checked	Drawn	Checked
PSG	-	RA	RA	E



ALTERATION		INITIALS	DATE
A	NEW DRG. No. ADDED		2/2/60
B	ITEMS 01 & 02 ANGULAR RELATION WAS 0°		2/2/60
C	ITEM 03 ADDED.		2/2/60
D	ITEMS 01-03 SAE SPEC. ADDED.		2/2/60

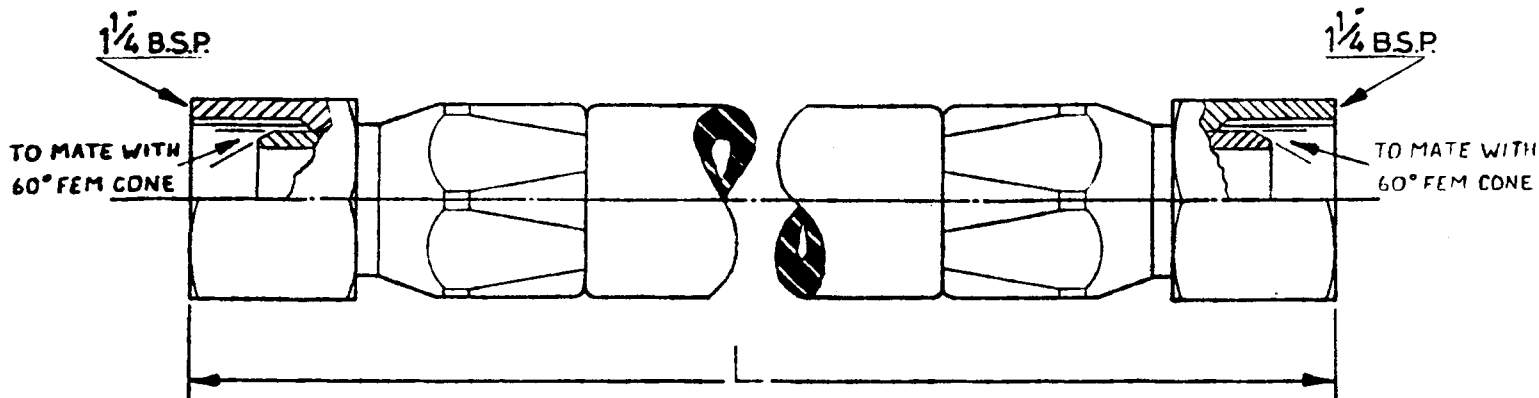
ITEM No.	LENGTH Lmm	HOSE DATA						ANGULAR RELATION	B.R. CAT NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS. BAR	TEMP. °C	REINFORCED BY	MIN. BEND RADIUS mm			
01	560	100R5	—	55	-40 TO +93	SEE NOTE 1	190	270°	72/457058,	
02	680	"	—	"	" " "	" " "	"	"	72/457158,	
03	635	"	—	"	" " "	" " "	"	0°	51/8702850,	

FORMERLY BR DRG.No.
G-A3-1027

TYPE 'P' RUBBER HOSE
22.4 mm BORE
WITH REUSABLE FITTINGS

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

Scale	A	B	C	D
Drawing No M-A3-9001947				
Drawn Traced	Checked	Date		
PSG			10/80	

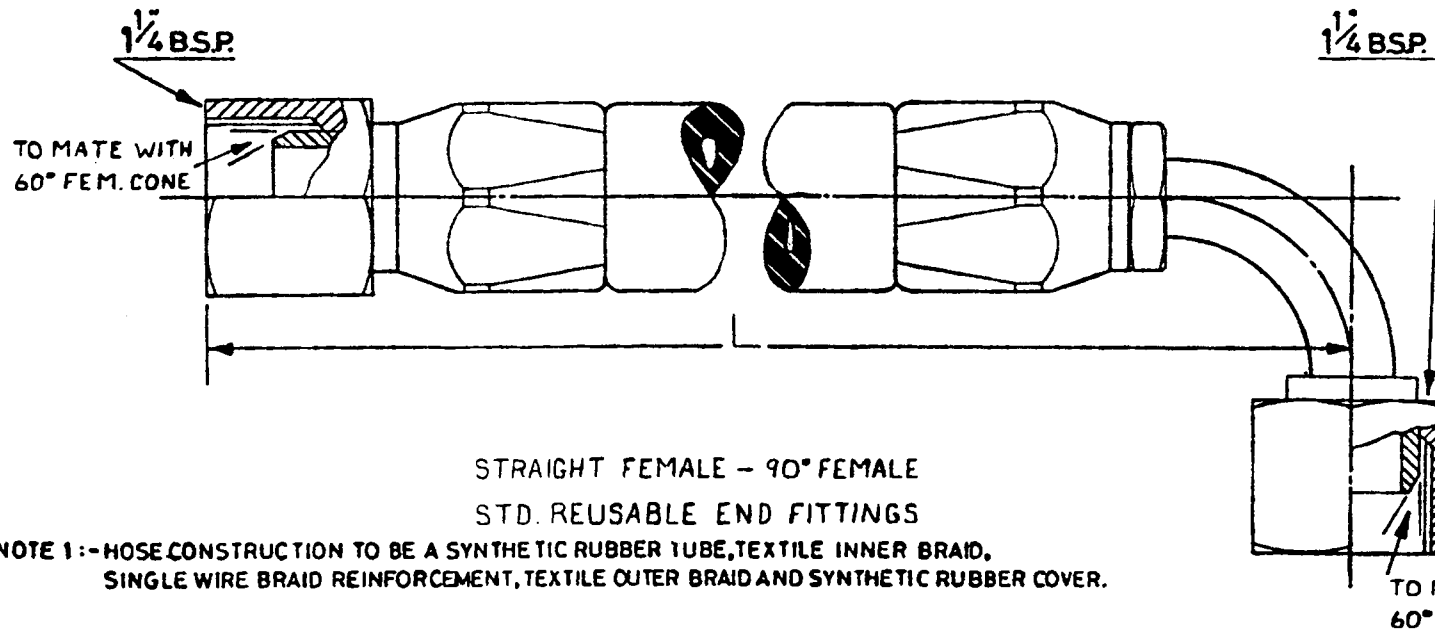


STRAIGHT FEMALE - STRAIGHT FEMALE
STD. REUSABLE END FITTINGS

NOTE 1:- HOSE CONSTRUCTION TO BE A SYNTHETIC RUBBER TUBE, TEXTILE INNER BRAID,
SINGLE WIRE BRAID REINFORCEMENT, TEXTILE OUTER BRAID AND SYNTHETIC RUBBER COVER.

ITEM No	LENGTH L mm	HOSE DATA						B.R. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS-BAR	TEMP °C	REINFORCED BY	MIN. BEND RADIUS mm		
		SAE	BSS						
01	555	100R5	—	45	-40 TO +93	SEE NOTE 1	230	72/4572	58,
02	730	-	—	"	" " "	" " "	"	72/4573	58,
03	300	-	—	"	" " "	" " "	"	72/1816	253,254,
04	275	-	—	"	" " "	" " "	"	72/4574	253,254,
05	410	-	—	"	" " "	" " "	"	72/5505	58,

ISSUE LETTER	ALTERATION	ISSUES INITIALS	DATE
A	NEW DRG No. ADDED		
B	ITEM 05 ADDED		
C	ITEMS 01-05 SAE SPEC. ADDED.	MPE	
FORMERLY BR DRG. No. G-A3-1013			
TYPE 'P' RUBBER HOSE 28.5 mm BORE WITH REUSABLE FITTINGS			
CHIEF MECHANICAL & ELECTRICAL ENGINEER BRITISH RAILWAYS BOARD STANDARDS & RATIONALIZATION DERBY			
Scale		A	B C
Drawing No	M-A3-9001948		
Drawn	Traced	Checked	Date
PEG		KA	6/80



ISSUE LETTER	ALTERATION	DATE
A	NEW DRG No ADDED	
B	ITEMS 04 & 05 ADDED	
C	ITEMS 01-05 SAE SPEC ADDED	
D	ITEM 06 ADDED	
E	ITEM 01 CLASS 141 ADDED	
F	ITEM 01 CLASS 142 ADDED	
G	ITEM 06 DELETED	

ITEM No.	LENGTH L mm	HOSE DATA				B.R. CAT. NUMBER	FITTED ON	
		SPECIFICATION		WORKING PRESS-BAR	TEMP. °C			REINFORCED BY	MIN BEND RADIUS mm
		SAE	BSS					
01	630	100R5	---	45	-40 to +93	SEE NOTE 1	230	72/4575 58, 141.142
02	710	"	---	"	" " "	" " "	"	72/4576 58,
03	910	"	---	"	" " "	" " "	"	72/4577 58,
04	580	"	---	"	" " "	" " "	"	72/4594 58,
05	690	"	---	"	" " "	" " "	"	72/4595 58.
06								

FORMERLY BR DRG.No. G-A3-1014

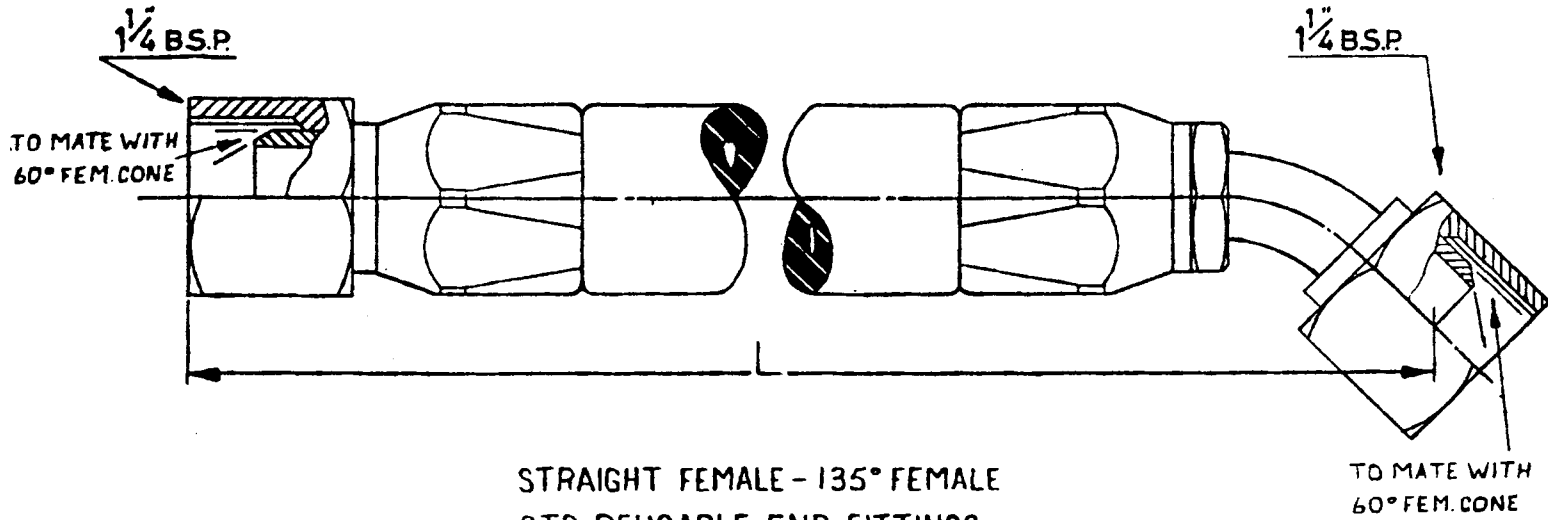
TYPE 'P' RUBBER HOSE
28.5 mm BORE
WITH REUSABLE FITTINGS

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	A	B	C	D	E
	F	G			

Drawing No
M-A3-9001949

Drawn	Traced	Checked	Date
P.S.G.			6/80



**STRAIGHT FEMALE - 135° FEMALE
STD. REUSABLE END FITTINGS**

**NOTE 1:- HOSE CONSTRUCTION TO BE A SYNTHETIC RUBBER TUBE, TEXTILE INNER BRAID,
SINGLE WIRE BRAID REINFORCEMENT, TEXTILE OUTER BRAID AND SYNTHETIC RUBBER COVER.**

ISSUE LETTER	ALTERATION	BY INITIALS	DATE
A	NEW DRG. No. ADDED.		
B	ITEMS 03 & 04 ADDED.		
C	ITEMS 01-04 SAE SPEC. ADDED	MFB	
D	ITEMS 02 & 04 DELETED		

FORMERLY BR DRG. No.
G-A3-1005

ITEM No.	LENGTH Lmm	HOSE DATA				B.R. CAT. NUMBER	VEHICLE / CLASS		
		SPECIFICATION		WORKING PRESS-BAR	TEMP. °C			REINFORCED BY	MIN. BEND RADIUSmm
01	510	100R5	—	45	-40to+93	SEE NOTE 1	230	72/4557	58,
02									
03	1200	-	—					51/16280	20,
04									

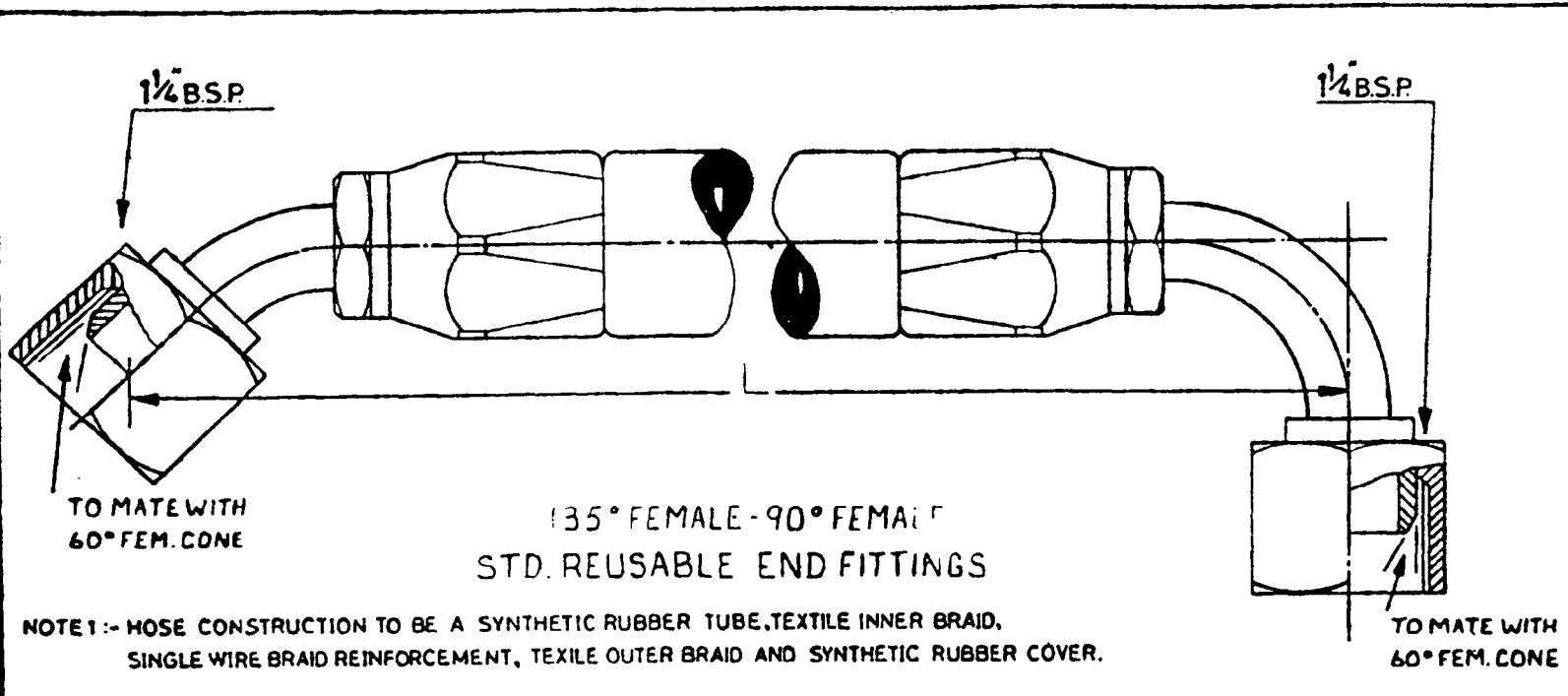
**TYPE 'P' RUBBER HOSE
28.5mm BORE
WITH REUSABLE FITTINGS**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDIZATION DERBY**

Scale _____ A B C D

Drawing No
M-A3-9001950

Drawn Traced Checked Date
PSG - ✓/ 3/80



NOTE 1:- HOSE CONSTRUCTION TO BE A SYNTHETIC RUBBER TUBE, TEXTILE INNER BRAID, SINGLE WIRE BRAID REINFORCEMENT, TEXTILE OUTER BRAID AND SYNTHETIC RUBBER COVER.

ISSUE LETTER	ALTERATION		INITIALS	DATE
	A	NEW DRG No ADDED.		
B	ITEMS 01 & 02 SAE SPEC ADDED.		MFD	

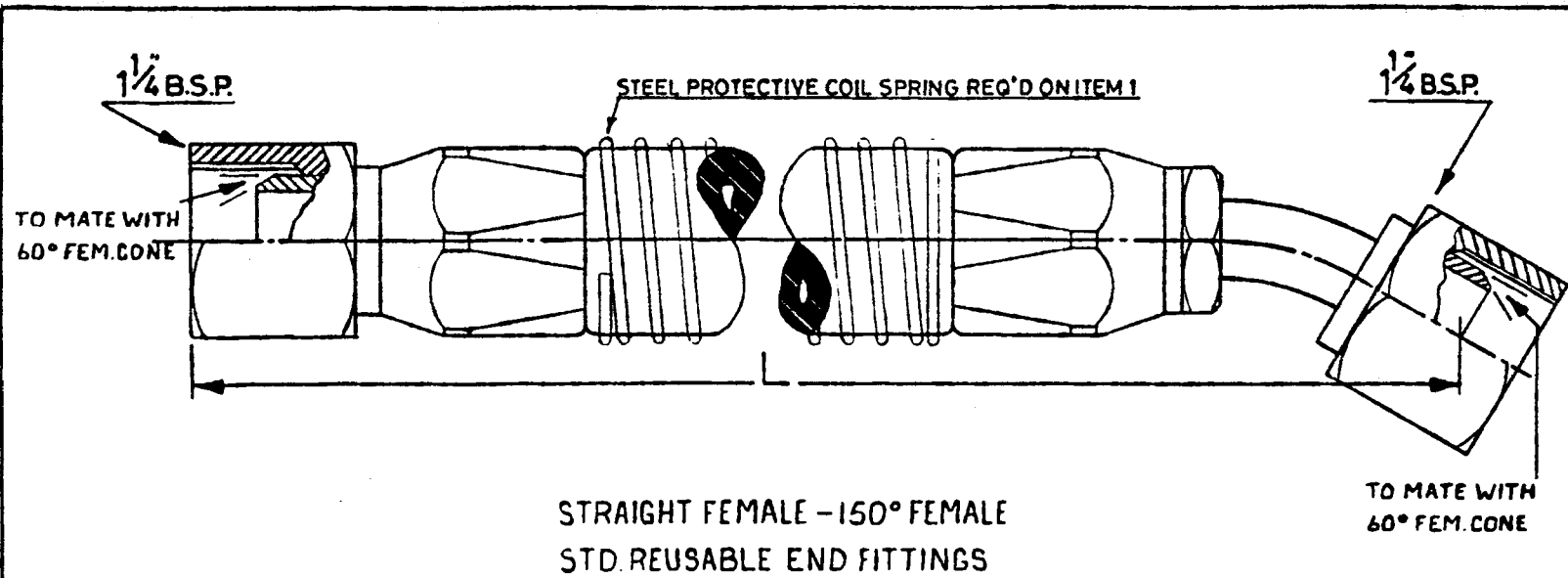
ITEM No.	LENGTH Lmm	HOSE DATA						ANGULAR RELATION	B. R. CAT NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS-BAR	TEMP °C	REINFORCED BY	MIN BEND RADIUS mm			
		SAE	BSS							
01	405	100R5	—	45	-40 TO +93	SEE NOTE 1	230	0°	51/87029 50.	
02	815	"	—	"	" " "	" " "	"	0°	51/87030 50.	

FORMERLY BR DRG No
G-A3-1015

TYPE 'P' RUBBER HOSE
28.5 mm BORE
WITH REUSABLE FITTINGS

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	A	B		
Drawing No	M-A3-9001951			
Drawn / Traced	PSG	Checked	Date	
			6/80	



ISSUE LETTER	ALTERATION		DATE
A	NEW DRG No ADDED		7/80

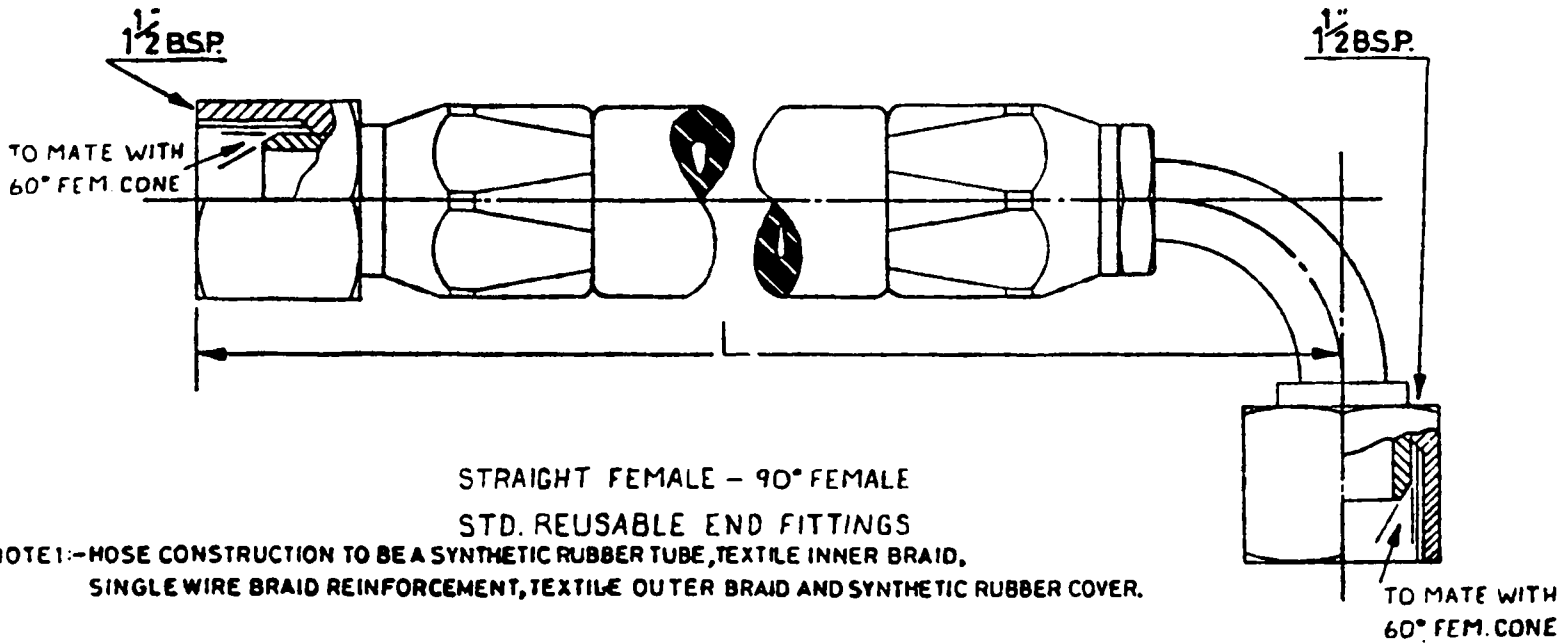
ITEM No.	LENGTH Lmm	HOSE DATA						B.R. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS-BAR	TEMP. °C	REINFORCED BY	MIN. BEND RADIUSmm		
		SAE	BSS						
01	435	100R1-A3832-B1		43	-40 to +93	1 WIRE BRAID	420	72/457958,	

FORMERLY BR DRG.No. G-A3-1026

TYPE 'P' RUBBER HOSE
31.8mm BORE
WITH REUSABLE FITTINGS

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	A		
Drawing No	M-A3-9001953		
Drawn/Traced/Checked/Date	PSG		7/80



ISSUE LETTER	ALTERATION	DATE
A	NEW DRG No ADDED	
B	ITEM 01 SAE SPEC ADDED	

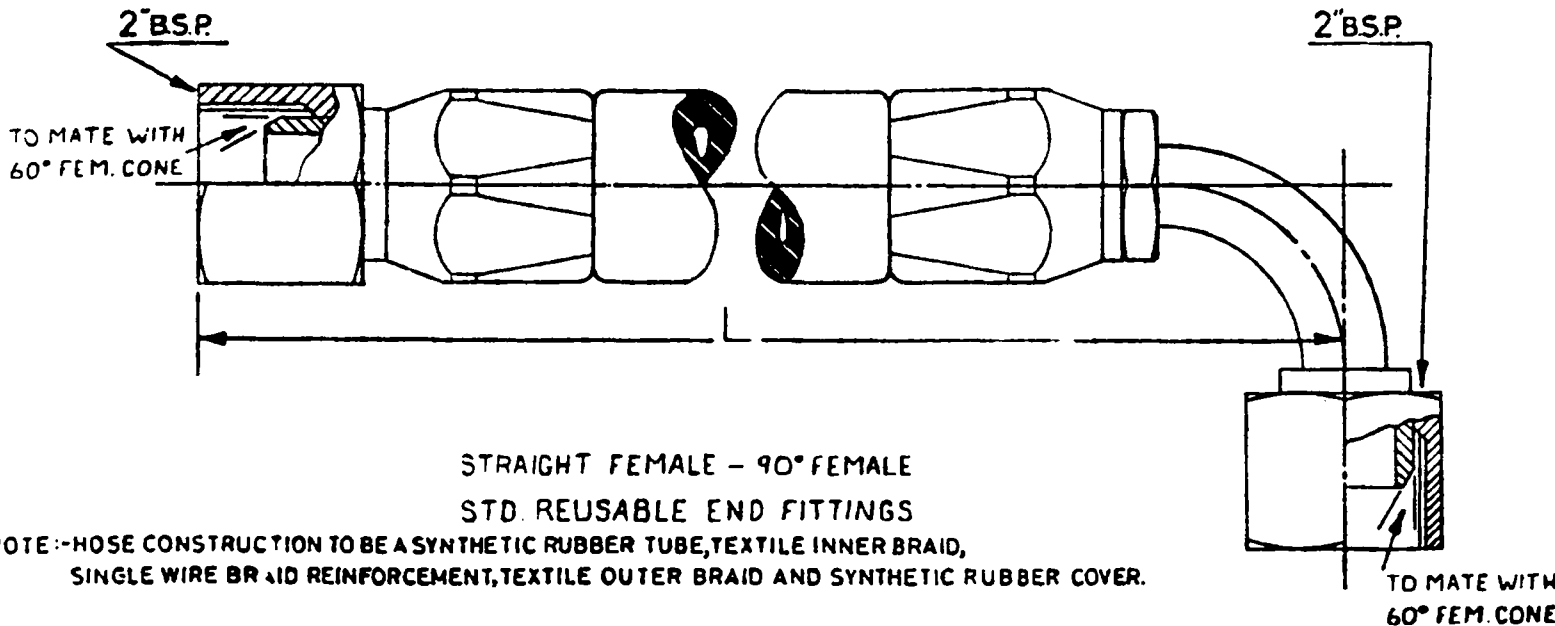
ITEM No.	LENGTH L mm	HOSE DATA							BR CAT NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS-BAR	TEMP °C	REINFORCED BY	MIN BEND RADIUS mm			
		SAE	BSS							
01	410	100R5	—	35	-40 to +93	SEE NOTE 1	265	72/4562	58,	

FORMERLY BR DRG No. G-A3-1010

TYPE 'P' RUBBER HOSE
35.1 mm BORE
WITH REUSABLE FITTINGS

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale		A	B		
Drawing No	M-A3-9001955				
Drawn	Traced	Checked	Date		
P.S.G.	-			478	



ITEM No	LENGTH L mm	HOSE DATA					REINFORCED BY	MIN BEND RADIUS mm	B.R CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESS-BAR	TEMP. °C					
		SAE	BSS							
01	465	100R5	—	25	-40 to +93	SEE NOTE 1	340	70/22180	253,254,	

ISSUE LETTER	ALTERATION	ISSUES INITIALS	DATE
A	NEW DRG No ADDED.		
B	(ITEM) SAE SPEC. ADDED.		

FORMERLY BR DRG.No.
G-A3-1025

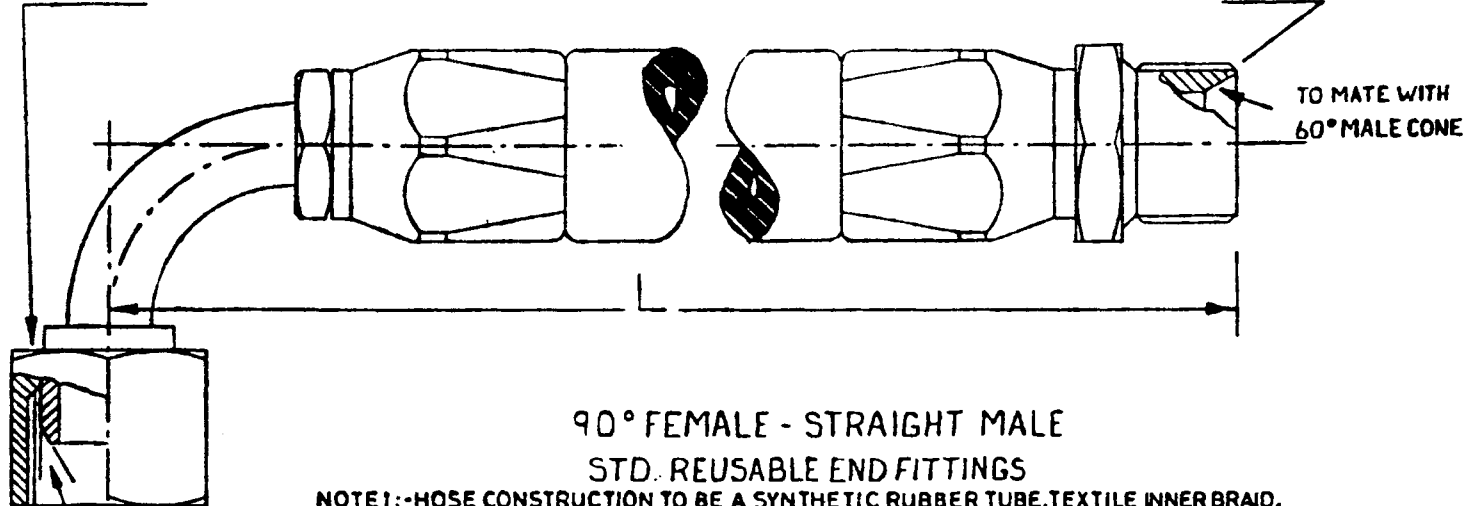
TYPE 'P' RUBBER HOSE
46.0 mm BORE
WITH REUSABLE FITTINGS

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale		A	B		
Drawing No	M-A3-9001959				
Drawn	Traced	Checked	Date		
PSG	-	✓	7/80		

1" B.S.P.

1" B.S.P.



TO MATE WITH
60° MALE CONE

TO MATE WITH
60° FEM. CONE

90° FEMALE - STRAIGHT MALE

STD. REUSABLE END FITTINGS

NOTE 1:- HOSE CONSTRUCTION TO BE A SYNTHETIC RUBBER TUBE, TEXTILE INNER BRAID,
SINGLE WIRE BRAID REINFORCEMENT, TEXTILE OUTER BRAID AND SYNTHETIC RUBBER COVER.

ISSUE LETTER	ALTERATION	QUANTITY	DATE
A	ITEM 01 SAE SPEC. ADDED.	2	10/80

ITEM No	LENGTH Lmm	HOSE DATA				REINFORCED BY	MIN BEND RADIUS mm	BR CAT NUMBER	VEHICLE / CLASS
		SPECIFICATION SAE	SPECIFICATION BSS	WORKING PRESS. BAR	TEMP °C				
01	305	100R5	—	55	-40 to +93	SEE NOTE 1	190	72/385	253.254.

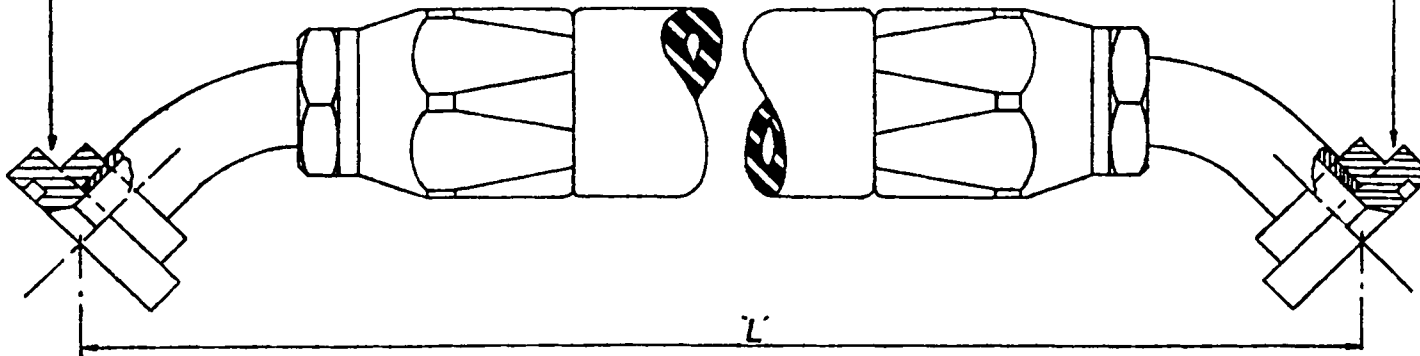
TYPE 'P' RUBBER HOSE
22.4mm BORE
WITH REUSABLE FITTINGS

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale	—	A
Drawing No	M-A3-900220	
Drawn	Traced	Checked
P.S.G.	—	10/80

FLANGE TO SAE J518c
STANDARD PRESSURE SERIES

FLANGE TO SAE J518c
STANDARD PRESSURE SERIES



135° SAE O RING FLANGE - 135° SAE O RING FLANGE
STD REUSABLE END FITTINGS

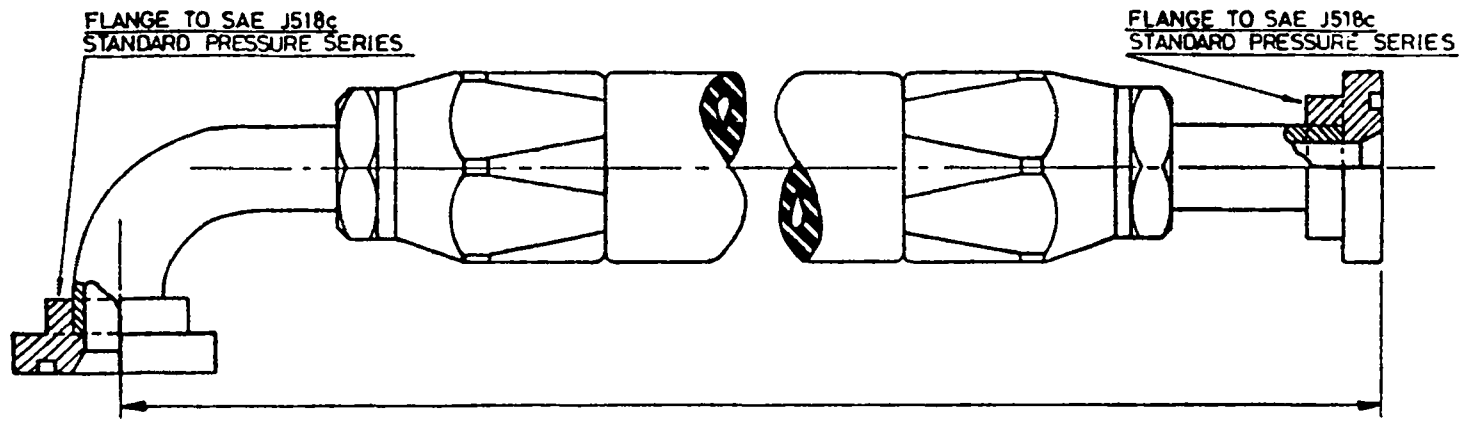
ANGULAR RELATION OF END IS MEASURED CLOCKWISE
WITH THE COUPLING FURTHEST FROM EYE AT ZERO

NOTE 1:- HOSE CONSTRUCTION TO BE A SYNTHETIC RUBBER TUBE TEXTILE INNER BRAID
SINGLE WIRE BRAID REINFORCEMENT TEXTILE OUTER BRAID AND SYNTHETIC RUBBER COVER

ISSUE LETTER	ALTERATION		DATE
	A	FIRST ISSUE		ME

<p>TYPE P RUBBER HOSE 28.5mm BORE WITH REUSABLE FITTINGS</p>			
<p>CHIEF MECHANICAL & ELECTRICAL ENGINEER BRITISH RAILWAYS BOARD MATERIAL SERVICES DERBY</p>			
Scale	A		
Drawing NO	M-A3-8022876		
Drawn By	IR.	Checked	Date
			8/83

ITEM NO	LENGTH L mm	HOSE DATA				BR CAT NUMBER	ANGULAR RELATION	VEHICLE / CLASS	
		SPECIFICATION		WORKING PRESSURE	TEMPERATURE				REINFORCED BY
		SAE	BSS	BAR	C				
01	735	100R5		45	-40 TO +93	SEE NOTE 1	15/78070	0°	150



90° SAE Ø RING FLANGE - STRAIGHT SAE Ø RING FLANGE.
STD REUSABLE END FITTINGS.

NOTE 1:- HOSE CONSTRUCTION TO BE A SYNTHETIC RUBBER TUBE TEXTILE INNER BRAID
SINGLE WIRE BRAID REINFORCEMENT TEXTILE OUTER BRAID AND SYNTHETIC RUBBER COVER.

ISSUE LETTER	ALTERATION	DMAN'S INITIALS	DATE
A	FIRST ISSUE	I.R.	10/84
B	ITEMS 02 & 03 ADDED	I.R.	07/85

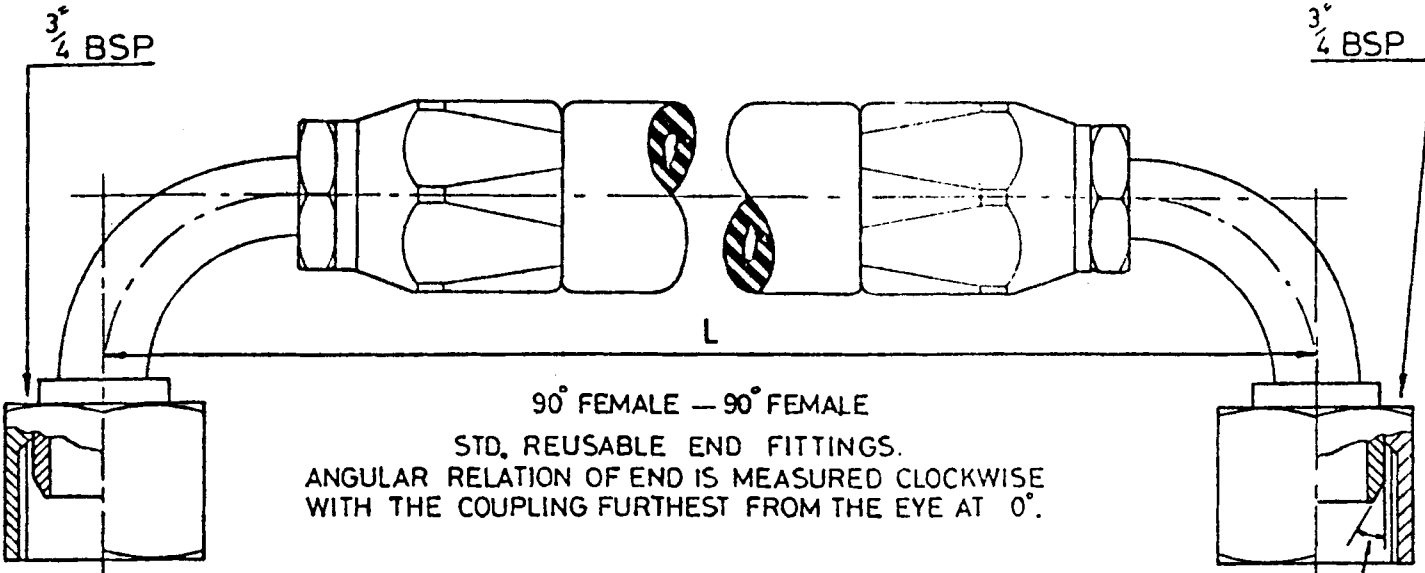
ITEM No.	LENGTH Lmm.	HOSE DATA				BR CAT NUMBER	VEHICLE/ CLASS	
		SPECIFICATION SAE	BSS	WORKING PRESSBAR	TEMPERATURE °C			REINFORCED BY
01	800	100R5	—	45	-40 TO +93	SEE NOTE 1	15/78163	150/1
02	2750	"	"	"	"	"	15/82797	142V
03	2400	"	"	"	"	"	15/82798	142V

TYPE 'P' RUBBER HOSE
28.5mm BORE
WITH REUSABLE FITTINGS

DIRECTOR OF MECHANICAL
& ELECTRICAL ENGINEERING.
BRITISH RAILWAYS BOARD.
DESIGN SUPPORT-GENERAL.
DERBY.

Scale	A	B		
Drawing No. M-A3-9029107				
Drawn	Traced	Checked	Date	
I.R.			10/84	

ISSUE LETTER	ALTERATION		DATE
	TO MAN'S INITIALS		
A	FIRST ISSUE		



90° FEMALE — 90° FEMALE
 STD. REUSABLE END FITTINGS.
 ANGULAR RELATION OF END IS MEASURED CLOCKWISE
 WITH THE COUPLING FURTHEST FROM THE EYE AT 0°.

NOTE 1 - HOSE CONSTRUCTION TO BE A SYNTHETIC RUBBER TUBE, TEXTILE INNER BRAID,
 SINGLE WIRE BRAID REINFORCEMENT, TEXTILE OUTER BRAID AND SYNTHETIC RUBBER COVER.

TO MATE WITH
 60° FEM. CONE.

ITEM No.	LENGTH Lmm	HOSE DATA						ANGULAR RELATION	BR CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION		WORKING PRESSBAR	TEMP °C	REINFORCED BY	MIN. BEND RADIUSmm			
		SAE	BSS							
01	870	100R5	—	105	-40 TO +93	SEE NOTE 1	165	282°	15/1701	DMU

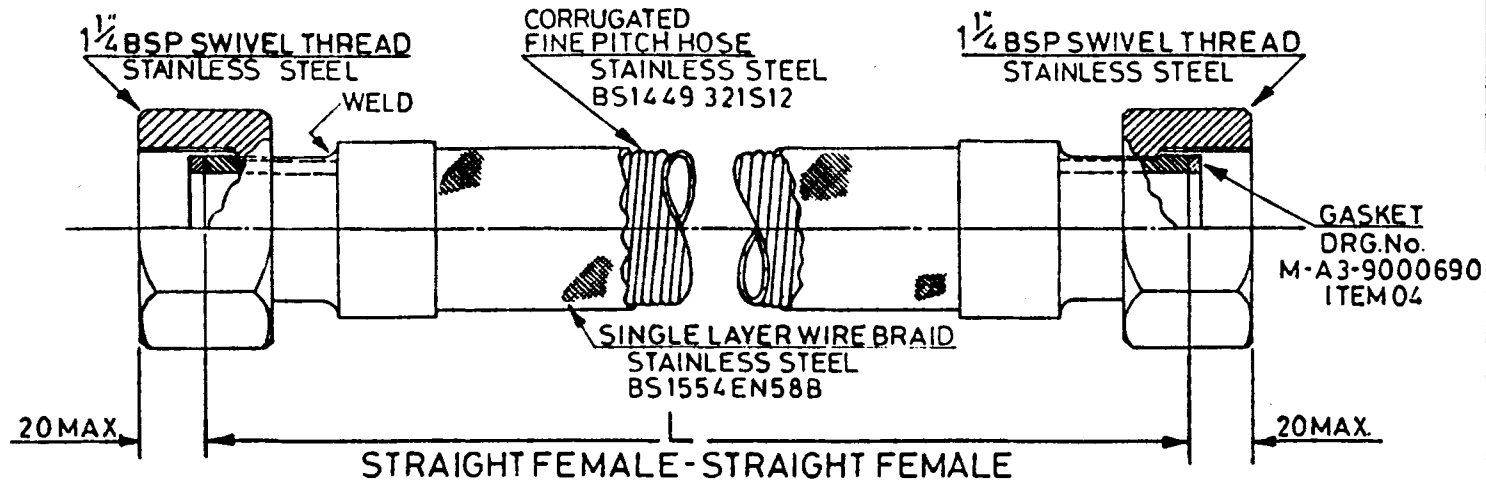
TYPE 'P' RUBBER HOSE
 15.8mm BORE
 WITH REUSABLE FITTINGS

DIRECTOR OF MECHANICAL & ELECTRICAL ENGINEERING
 BRITISH RAILWAYS BOARD
 DESIGN SUPPORT-GENERAL
 DERBY.

Scale	—	A		
Drawing No	M-A3-9029184			
Drawn	Traced	Checked	Date	
R			10/84	

SECTION 4

METALLIC HOSE ASSEMBLIES



ISSUE LETTER	ALTERATION	DATE
A	FIRST ISSUE	

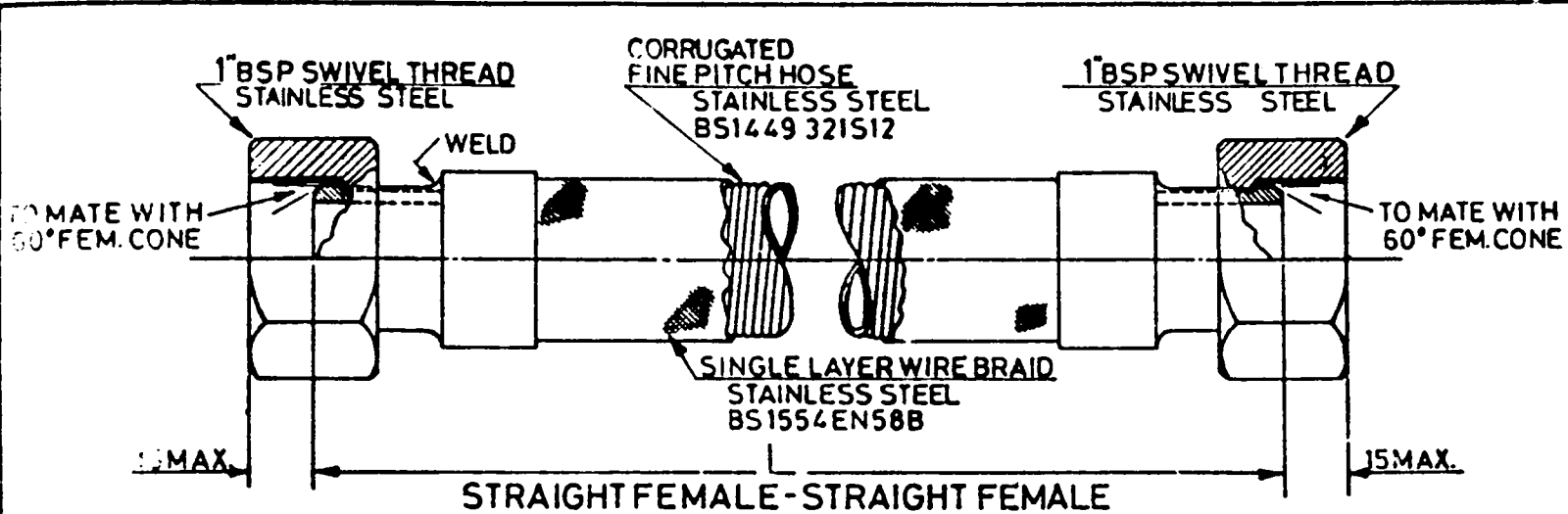
NOTE:-HOSE TO HAVE A MINIMUM BEND RADIUS OF 250mm(CONSTANT MOVEMENT)AND115mm(STATIC)

ITEM No.	LENGTH Lmm	HOSE DATA		HOSE ASSY WORKING PRESSURE	BR CAT. NUMBER	REMARKS	VEHICLE / CLASS
		WORKING PRESS.BAR	TEMPERATURE °C				
01	550	40	-40 TO +300	40 BAR	70/14906		253,254,
02	580	"	" " "	" "	72/4768		58,73,
03	635	"	" " "	" "	72/4765		58,
04	730	"	" " "	" "	72/4767		58,
05	400	"	" " "	" "	72/3603		56,03,27,
06	975	"	" " "	" "	70/14267		313,
07	260	"	" " "	" "	61/2213		47,

FLEXIBLE
METALLIC HOSE
32mm BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

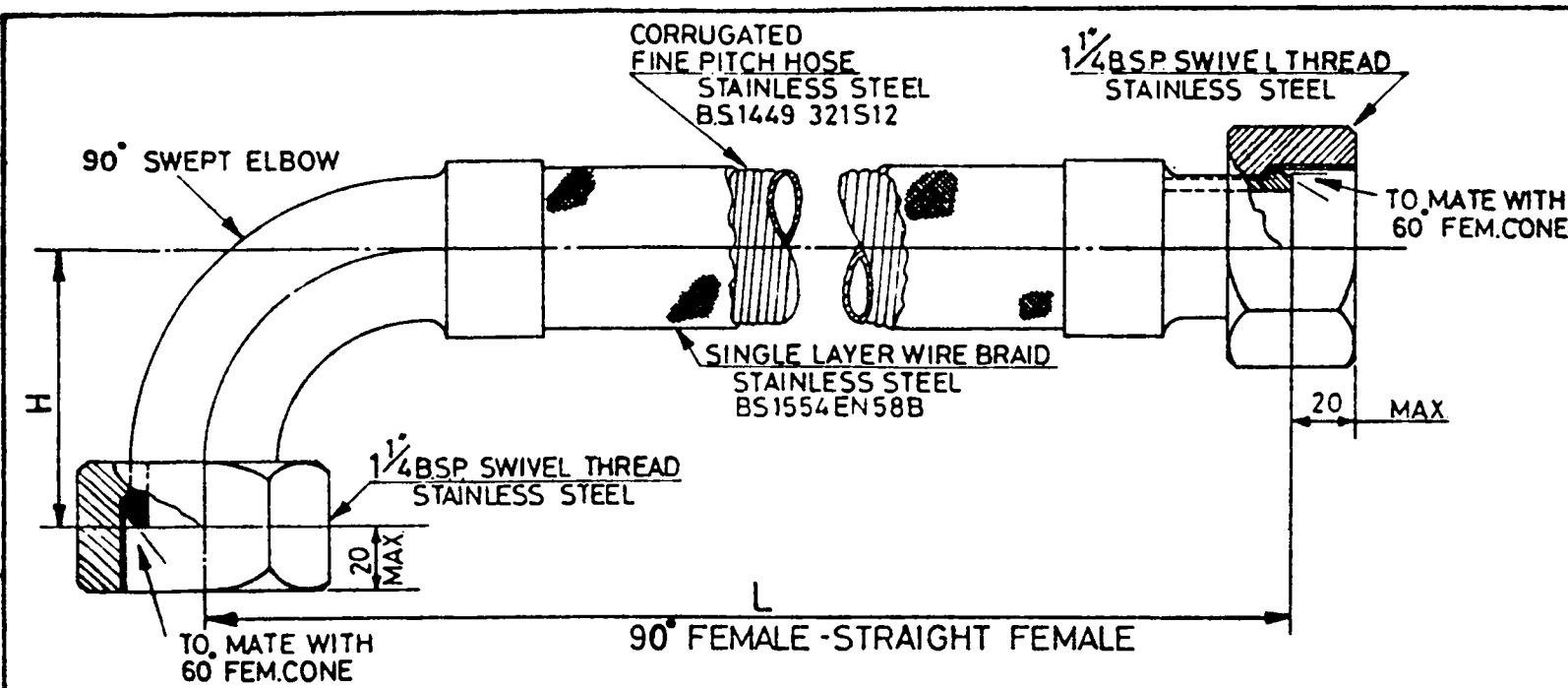
Scale	—	A		
Drawing No	M-A3-9004247			
Drawn	Traced	Checked	Date	
PSG	—	—	12/81	



NOTE:-HOSE TO HAVE A MINIMUM BEND RADIUS OF 225mm(CONSTANT MOVEMENT) AND 90mm(STATIC)

ITEM No.	LENGTH Lmm	HOSE DATA		HOSE ASSY WORKING PRESSURE	BRCAT. NUMBER	REMARKS	VEHICLE / CLASS
		WORKING PRESS.BAR	TEMPERATURE °C				
01	1180	50	-40 TO +300	50 BAR	72/5541		58,
02	780	-	" " "	" "	72/3816		253,254.
03	325	-	" " "	" "	72/7410		56
04	585	"	" " "	" "	72/7411		56

ISSUE LETTER	ALTERATION		DATE
A	FIRST ISSUE		
B	ITEM 03&04 ADDED		
INITIALS DATE			
DATE 12/81			
FLEXIBLE METALLIC HOSE 25mm BORE			
CHIEF MECHANICAL & ELECTRICAL ENGINEER BRITISH RAILWAYS BOARD STANDARDS & RATIONALIZATION DERBY			
Scale	---	A B	
Drawing No	M-A3-9004250		
Drawn/Traced		Checked	Date
P.S.G.	---	K.A	12/81



REVISIONS	ALTERATION	DRAWN BY	DATE
	A FIRST ISSUE	MJP	10-5-81

ITEM No.	LENGTH L mm.	HEIGHT H mm.	HOSE DATA		HOSE ASSY. WORKING PRESSURE	BR. CAT NUMBER	REMARKS	VEHICLE / CLASS
			WORKING PRESS BAR	TEMPERATURE C				
01	400	70	40	-40 TO + 300	40 BAR	70/22985		303

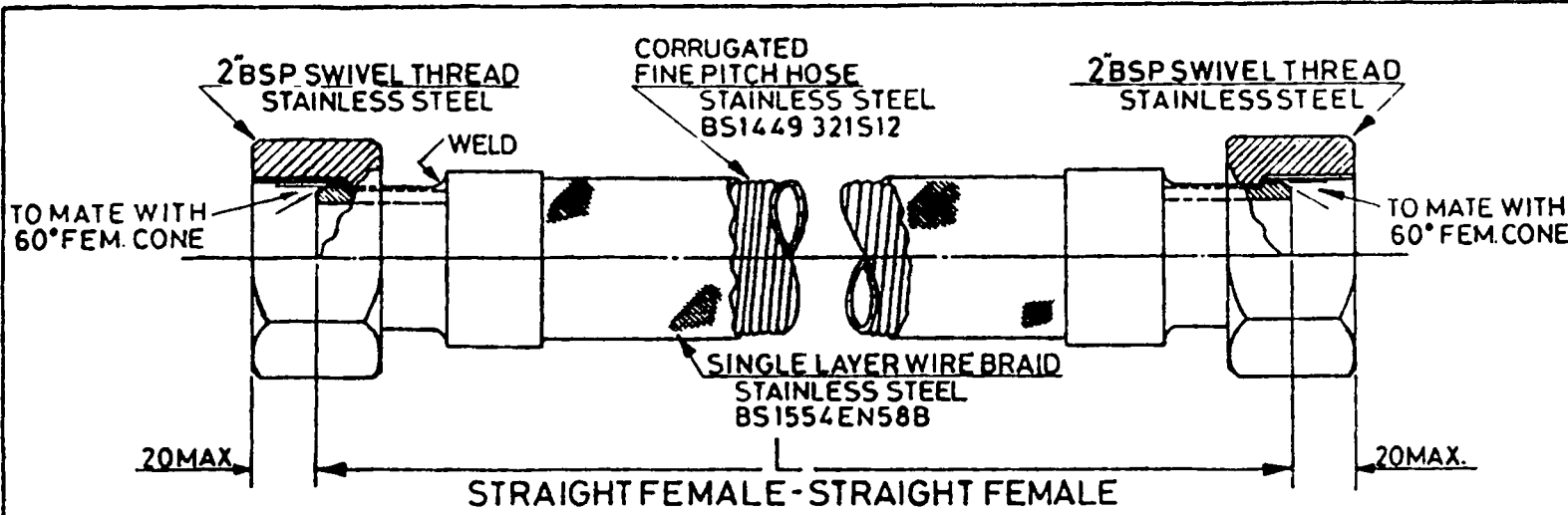
FLEXIBLE
METALLIC HOSE
32 mm BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale: _____ A

Drawing No. M-A3-9004251

Drawn	Trace	Checked	Date
I.N.I.		P.C.C.	10-5-81



NOTE:-HOSE TO HAVE A MINIMUM BEND RADIUS OF 355mm (CONSTANT MOVEMENT) AND 180mm (STATIC)

ISSUE LETTER	ALTERATION		DRAWN & INITIALS	DATE
	A	FIRST ISSUE		

ITEM No.	LENGTH Lmm	HOSE DATA		HOSE ASSY WORKING PRESSURE	BR CAT. NUMBER	REMARKS	VEHICLE / CLASS'
		WORKING PRESS.BAR	TEMPERATURE °C				
01	1090	20	-40 TO +300	10	51/11877		40,45,46.

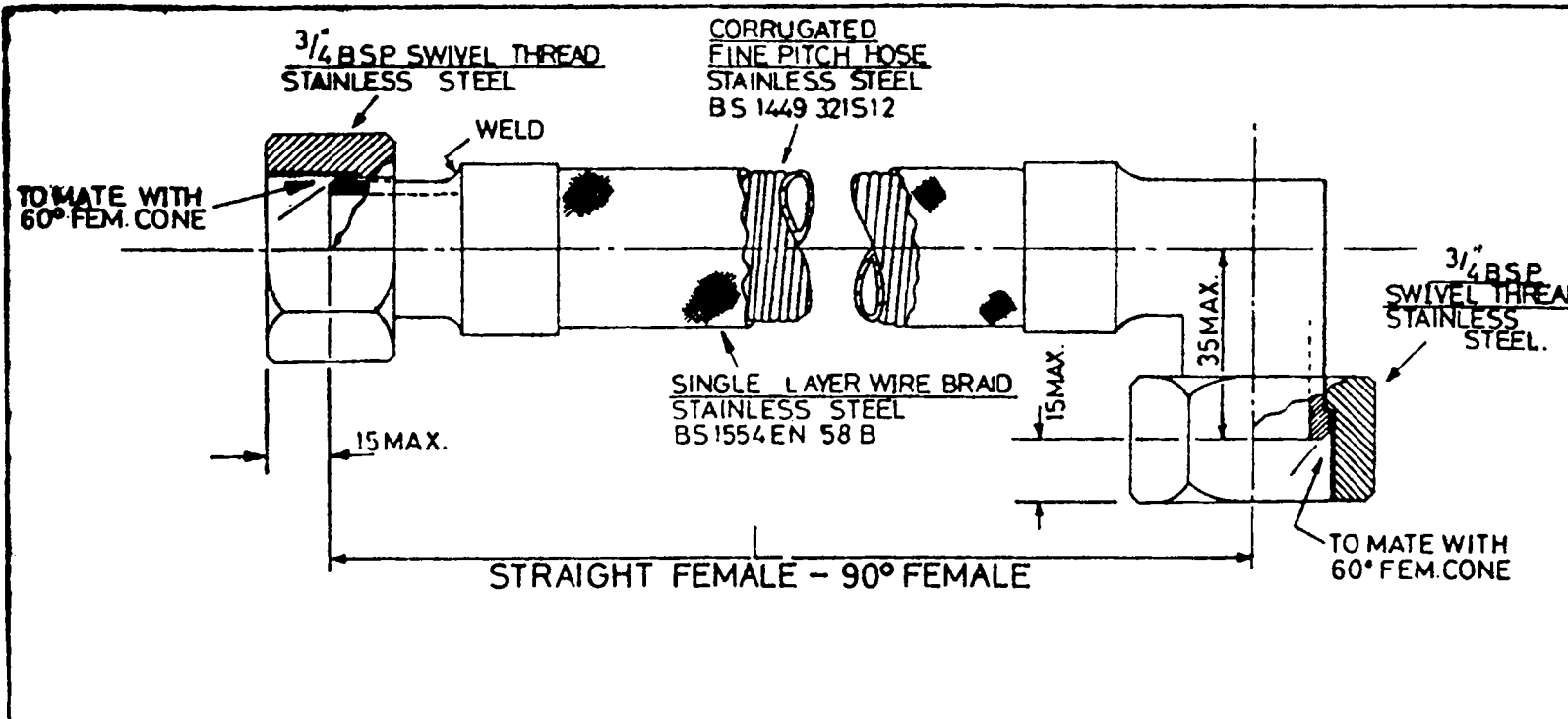
FLEXIBLE
METALLIC HOSE
50mm BORE

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale — A

Drawing No
M-A3-9004253

Drawn	Traced	Checked	Date
PSG.	—	KA	1/82



ISSUE LETTER	ALTERATION	DRAWN INITIALS	DATE
A	FIRST ISSUE		11/71

ITEM No	LENGTH L mm	HOSE DATA		HOSE ASSY WORKING PRESSURE	BR. CAT NUMBER	REMARKS	VEHICLE / CLASS
		WORKING PRESS BAR	TEMPERATURE °C				
01	785	50	-40 TO +300	50	72/5537	MOD. FM6121/007	56.
02	630	-	- . -	-	72/5538	" " "	56.
03	900	-	- . -	-	72/5539	" " "	56.

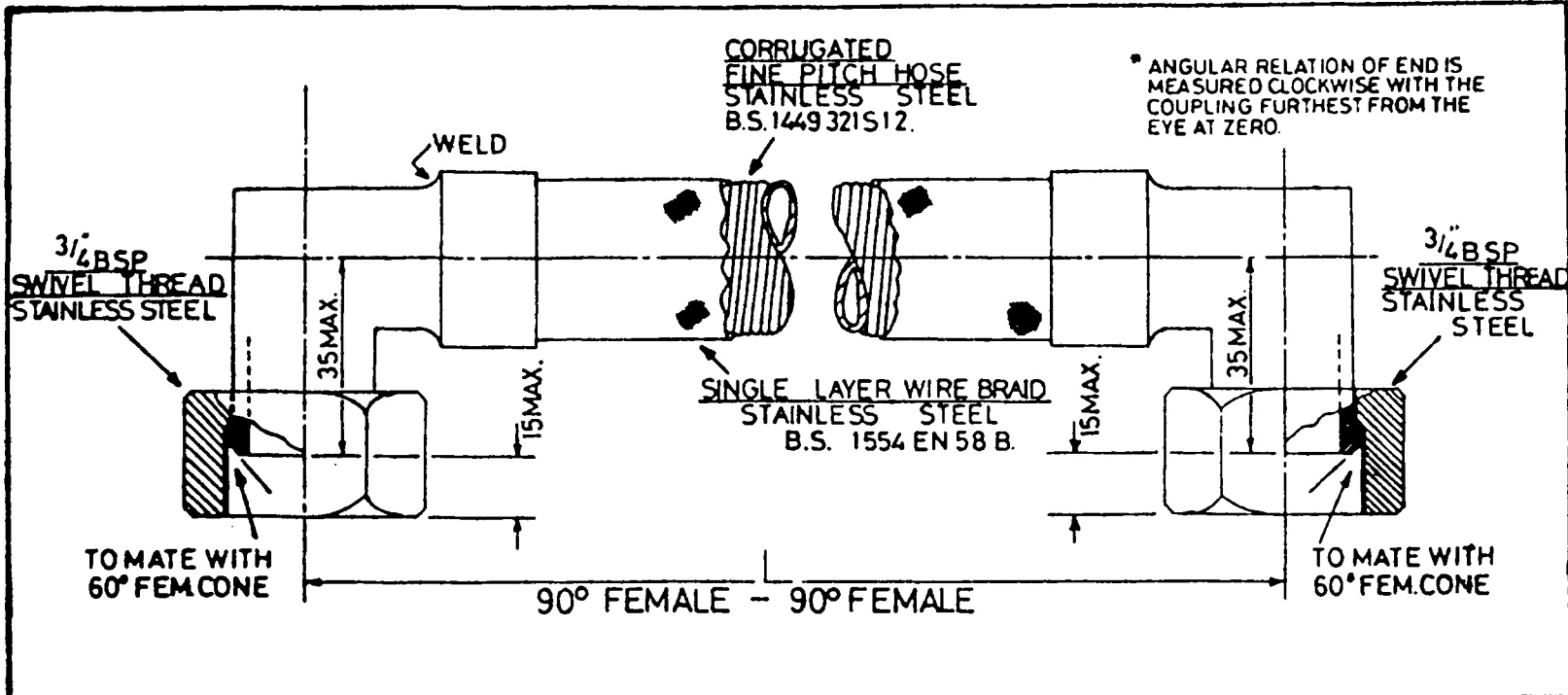
FLEXIBLE METALLIC HOSE 20 mm BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale A

Drawing No
M-A3-9004254

Drawn SB-W Traced Checked Date 1/82



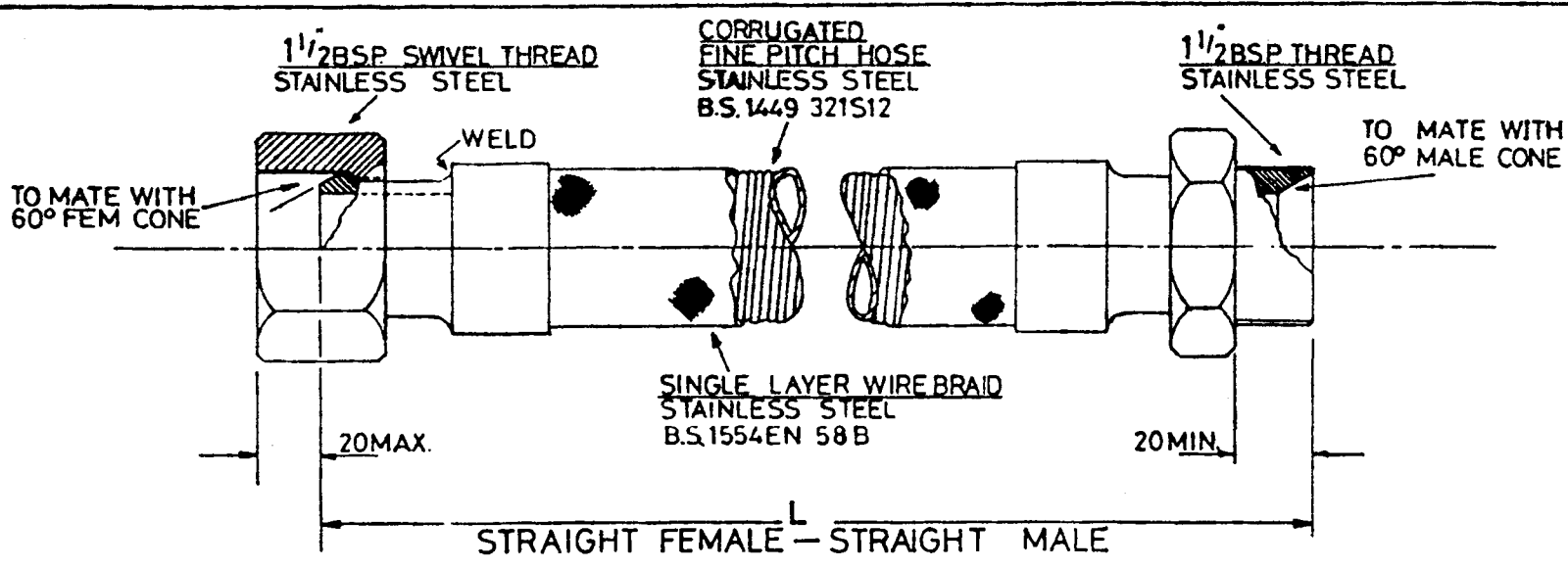
ALTERATION		ISSUE LETTER	DATE
A FIRST ISSUE			24/02

ITEM No.	LENGTH L mm.	HOSE DATA		HOSE ASSY WORKING PRESSURE	ANGULAR RELATION*	BR. CAT NUMBER.	REMARKS.	VEHICLE / CLASS
		WORKING PRESS. BAR	TEMPERATURE ° C.					
01	400	50	-40 TO +300	50	90°	72/5540	MOD.FM612i/007	56.

FLEXIBLE METALLIC HOSE 20mm BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER BRITISH RAILWAYS BOARD STANDARDS & RATIONALIZATION DERBY

Scale	—	A		
Drawing No	M-A3-9004257			
Drawn / Traced / Checked / Date	SB-W		AN	1/82



ISSUE LETTER	ALTERATION		DRAWN INITIALS	DATE
	A	FIRST ISSUE			J. A.	1/82

ITEM No.	LENGTH L mm.	HOSE DATA		HOSE ASSY WORKING PRESSURE	B.R. CAT. NUMBER	REMARKS	VEHICLE / CLASS
		WORKING PRESS. BAR	TEMPERATURE °C				
01	1150	25	-40 TO +300	25	71/4056		56

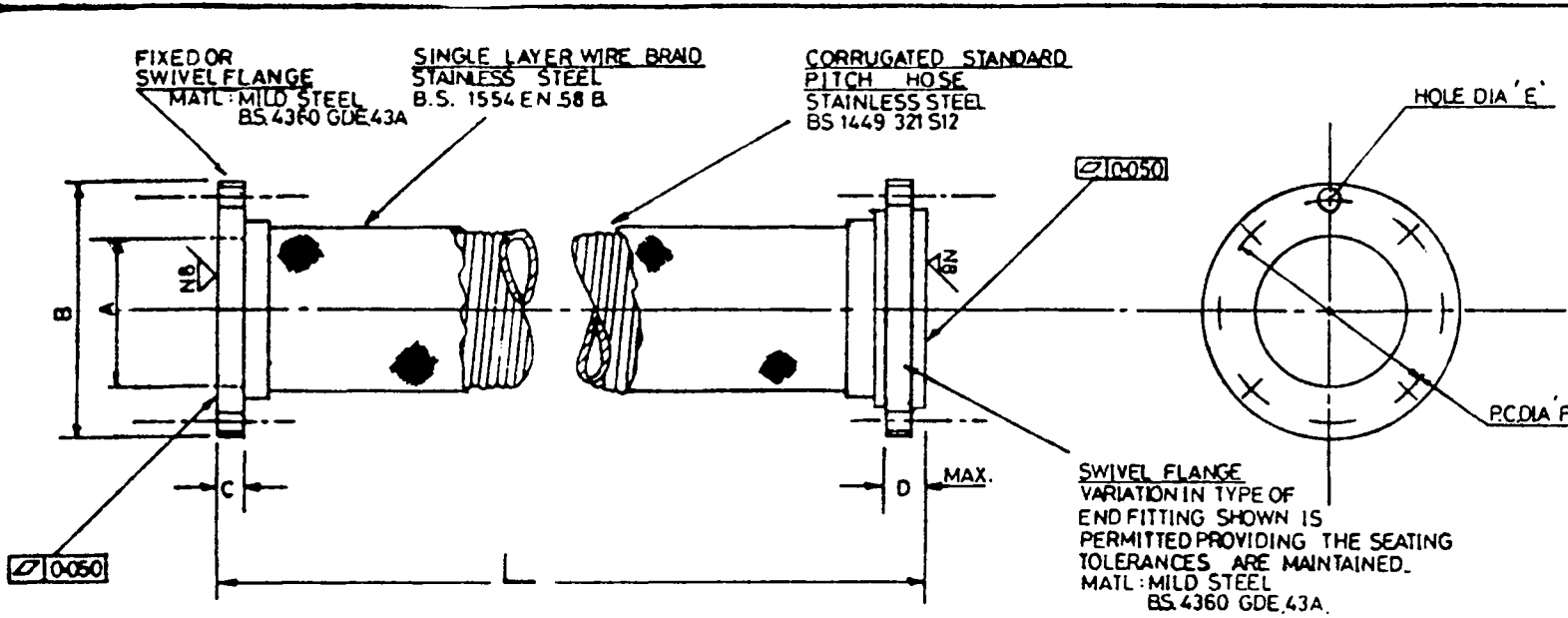
FLEXIBLE METALLIC HOSE
40 mm BORE

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale A B C D

Drawing N° M-A3-9004258

Drawn Traced Checked Date
S B-W ——— 756 1/82



NOTE :- THE EXPOSED FLEXIBLE SECTION MUST BE AT LEAST 50% OF OVERALL LENGTH.
THE FLATNESS OF FLANGE FACES QUOTED ARE AFTER WELDING.

ISSUE LETTER	ALTERATION	DATE	INITIALS
A	FIRST ISSUE	26/82	
B	ALTERNATIVE OF SWIVEL FLANGE ADDED.	29/83	
C	ITEM 05 ADDED	1/83	
D	FLANGE MATL WAS STAINLESS STEEL BS 970 GDE 321 S20	1/83	MFL
E	ITEM 05 DELETED	1/85	

ITEM No	LENGTH L mm	BORE A	DIMENSIONS					No OF HOLES	HOSE DATA		HOSE ASSY WORKING PRESSURE	BR. CAT NUMBER	VEHICLE / CLASS
			B	C	D	E	F		WORKING PRESSURE	TEMPERATURE °C			
01	197	65	159	14.5	23.5	17.5	127	4	15 BAR	-40 TO +400	15 BAR	71/4061	56,
02	247	80	178	16	25	"	146	"	10.5 "	" - "	10.5 "	71/4060	56,
03	272	90	197	"	27.5	"	165	8	10 -	- - -	10 -	71/4059	56,
04	272	100	210	17.5	29	"	178	"	9 -	- - -	9 -	71/4058	56,

REDRAWN FROM DRG. D1-A1-9004516

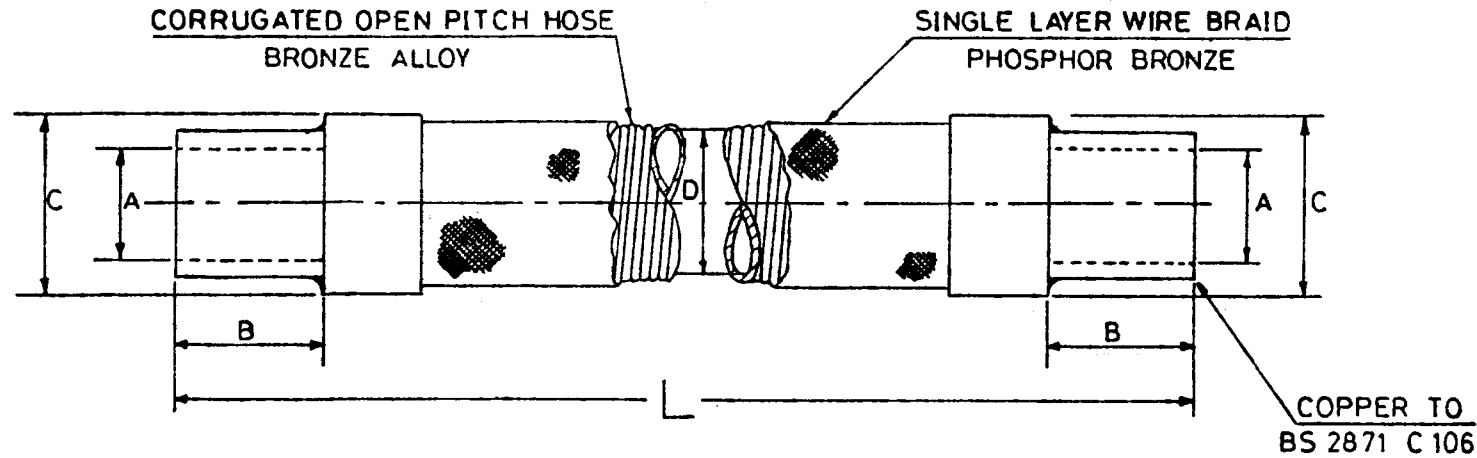
FLEXIBLE METALLIC HOSE WITH FLANGES

CHIEF MECHANICAL & ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale _____ A B C D E

Drawing No M-A3-9004259

Drawn Traced Checked Date SB-W _____ / / 82



ISSUE LETTER	ALTERATION		DRAWING INITIALS	DATE
	A	FIRST ISSUE			MFE

ITEM No	TO SUIT TUBE o/d	LENGTH L mm	DIMENSIONS				HOSE ASSEMBLY DATA		B.R. CAT NUMBER	REMARKS	VEHICLE/ CLASS
			A	B	C	D	WORKING PRESSURE BAR	TEMPERATURE °C			
01	1/4"	190	12.5	16	16	6	48	-50 to +200	72/5542	MK II	
02	3/8"	210	19	19	22	9.5	48	" " "	72/5543	MK III HST (RSB, RUK)	
03	1/2"	230	20.5	22	25.5	12.5	41	" " "	72/5544	253, 254, 56	
04	5/8"	250	25.5	25.5	25.5	12.5	41	" " "	72/5545	MK II, MK III HST (RUB)	
05											
06	7/8"	290	35	35	38	19	27	-50 to +200	72/5546	MK III SLEEPER	
07	1 1/8"	330	41	41	47.5	25.5	27	" " "	72/5547	MK II	
08	1 3/8"	375	44.5	44.5	57	32	27	" " "	72/5548	MK III	
09	1 5/8"	430	54	54	63.5	38	21	" " "	72/5549	MK II	

**VIBRATION
ABSORBER HOSE.**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY.**

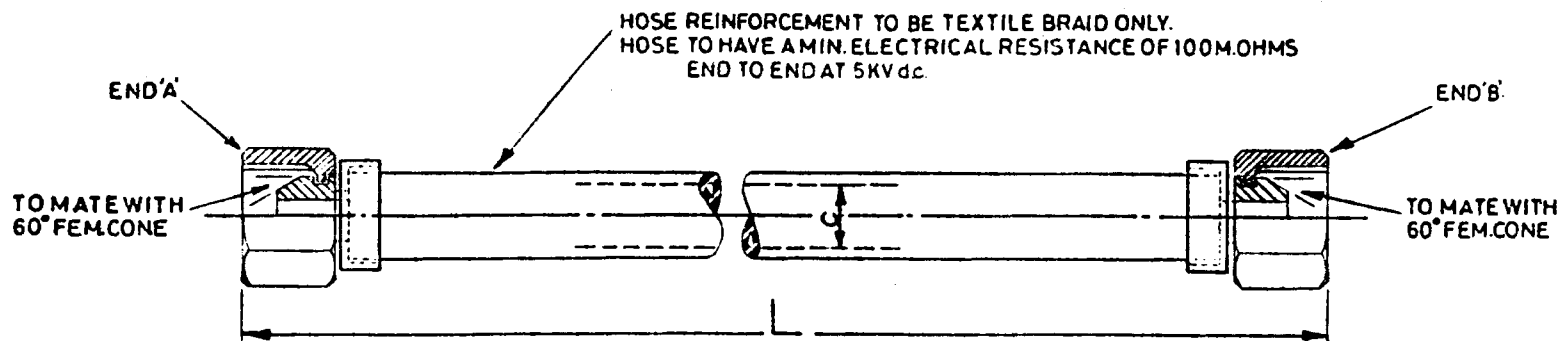
Scale A

Drawing No
M-A3-9014419

Drawn MN Traced Checked TSS Date 4/82

SECTION 5

MISCELLANEOUS HOSE ASSEMBLIES



STRAIGHT FEMALE-STRAIGHT FEMALE
SOCKETLESS END FITTINGS

ALTERATION		ISSUE LETTER	DATE
A	CAT.No.WAS16/2750		
B	NEW DRG.No.ADDED		

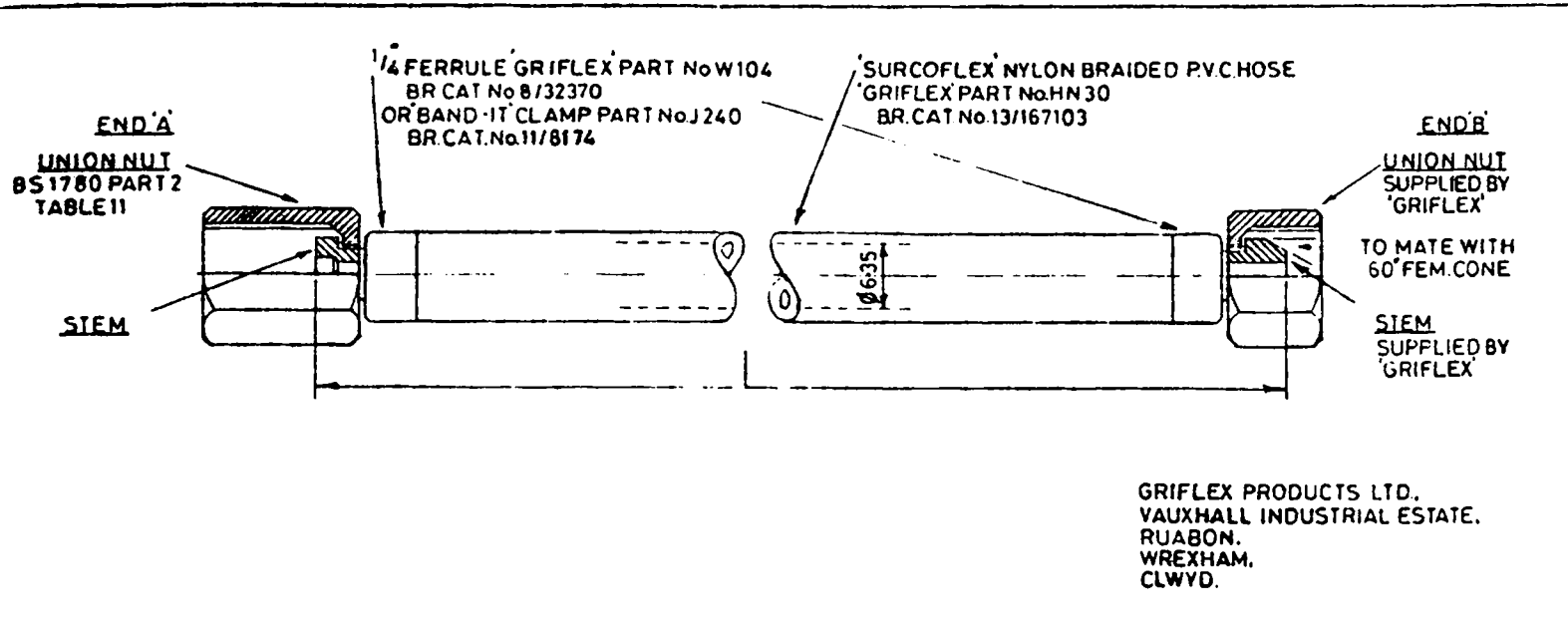
ITEM No.	LENGTH L m.m.	BORE C m.m.	END A THREAD	END B THREAD	APPROVED MANUFACTURERS PART/ASSY NUMBERS			B.R.CAT. NUMBER	FITTED ON
					AEROQUIP				
DF	500	6.4	1/4" BSP	1/4" BSP	E350-4/2556-47 E350-4/300 mm PA			8/26425	MK6 BOGIES

FORMERLY BR.DRG.No. G-A3-1063

TYPE 'P' RUBBER HOSE
(TEXTILE REINFORCED)
WITH SOCKETLESS FITTINGS

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS&RATIONALIZATION
DERBY

Scale		A	B		
Drawing No	M-A3-9006675				
Drawn	Traced	Checked			
P.S.G.	—				



ALTERATION		ISSUE LETTER	DATE
A	FIRST ISSUE		
B	ITEM 05 ADDED		

GRIFLEX PRODUCTS LTD.
VAUXHALL INDUSTRIAL ESTATE.
RUABON.
WREXHAM.
CLWYD.

ITEM No.	LENGTH Lmm	END A				END B				BRCAT.No. NUMBER	FITTED ON
		NUT		STEM		NUT		STEM			
		TH.D	BRCAT.No.	B.R.DRG.No.	BRCAT.No.	TH.D	PART.No.	BRCAT.No.	PART.No.		
01	640	8/44851	101M-A3-9009405	71/2090	F104	8/44227	S108	8/57530	71/1418	37.82.	
02	680	"	"	"	"	"	"	"	71/1419	253.254.50.58.	
03	430	"	"	"	"	"	"	"	90/6	81.83.85.86.87.	
04	510	"	"	"	"	"	"	"	71/4067	26,27,47,56.	
05	350	"	"	"	"	"	"	"	18/27860	303	

FLEXIBLE HOSE
FOR
PRESSURE GAUGES

CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY

Scale		A	B
Drawing No	M-A3-9009405		
Drawn	Traced	Checked	Date
P.S.G.			10/81

END A
UNION NUT
SUPPLIED BY
GRIFLEX

TO MATE WITH
60° FEM. CONE

STEM
SUPPLIED BY
GRIFLEX

1/4" FERRULE GRIFLEX PART No W104
BR. CAT. No 8/32370
OR BAND-IT CLAMP PART No J240
BR. CAT. No 11/8174

'SURCOFLEX' NYLON BRAIDED PVC HOSE
'GRIFLEX' PART No HN30
BR. CAT. No 13/167103

END B

UNION NUT
SUPPLIED BY
GRIFLEX

TO MATE WITH
60° FEM. CONE

STEM
SUPPLIED BY
GRIFLEX

GRIFLEX PRODUCTS LTD.
VAUXALL INDUSTRIAL ESTATE,
RUABON,
WREXHAM,
CLWYD.

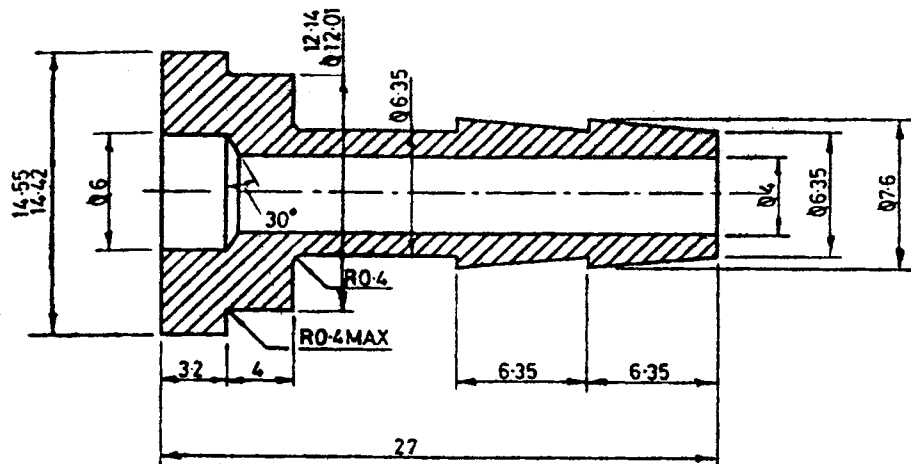
ISSUE LETTER	ALTERATION		JOB MAN'S INITIALS	DATE
	A	FIRST ISSUE		

ITEM No.	LENGTH Lmm	END A					END B					BRCAT No NUMBER	FITTED ON
		NUT		STEM			NUT		STEM				
		THD	PART No	BRCAT.No	PART No	BRCAT.No	THD	PART No	BRCAT.No	PART No	BRCAT.No		
01	200	3/8BSF	F104	8/44227	S108	8/57530	3/8BSF	F104	8/44227	S108	8/57530	18/27806	303.
02	500	"	"	"	"	"	"	"	"	"	"	18/27807	303.

**FLEXIBLE
PVC. HOSE
ASSEMBLIES**

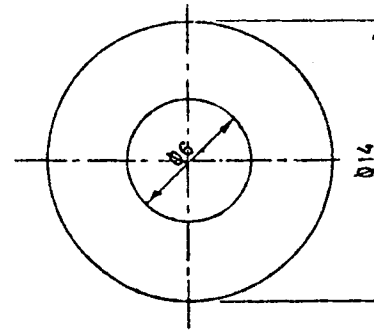
**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

Scale	—	A		
Drawing No.	M-A3-9009406			
Drawn	PSG	Traced	—	Checked
Date	4/83			



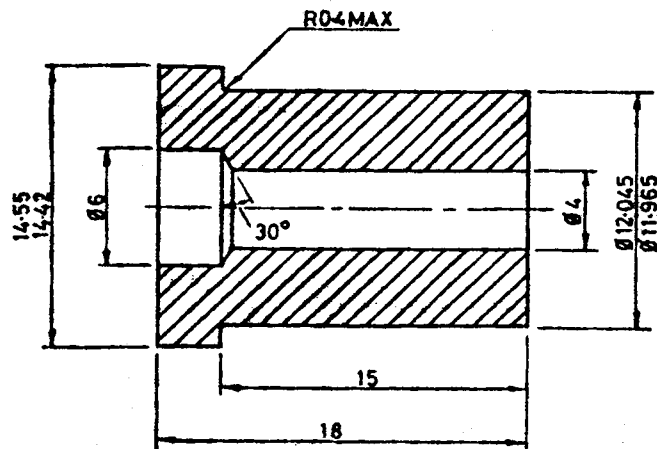
01 REDUCING STEM

MATL:-BRASS BS 2874 CZ121 COND'M
 ALL DIMENSIONS:0.1
 SUPERSEDES DRG.SL/DN/Y-2537/3 &
 L-A2-7641/1
 BR CAT No:-71/2090



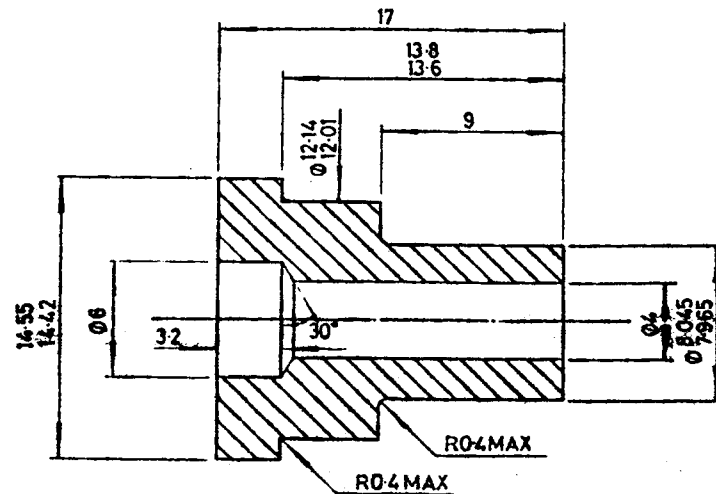
02 WASHER

MATL:-LEATHER 3THK.
 SUPERSEDES DRG.
 SL/DN/Y-2537/4 &
 L-A2-7641/2
 BR CAT No:-71/2091



03 ADAPTOR FOR YORKSHIRE FITTING

MATL:-BRASS BS 2874 CZ104 COND'M
 ALL DIMENSIONS OVER 0-6:0.2
 6-30:0.5
 UNLESS OTHERWISE SPECIFIED
 BR CAT No:-71/4460



04 ADAPTOR FOR YORKSHIRE FITTING TO PRESSURE GAUGE

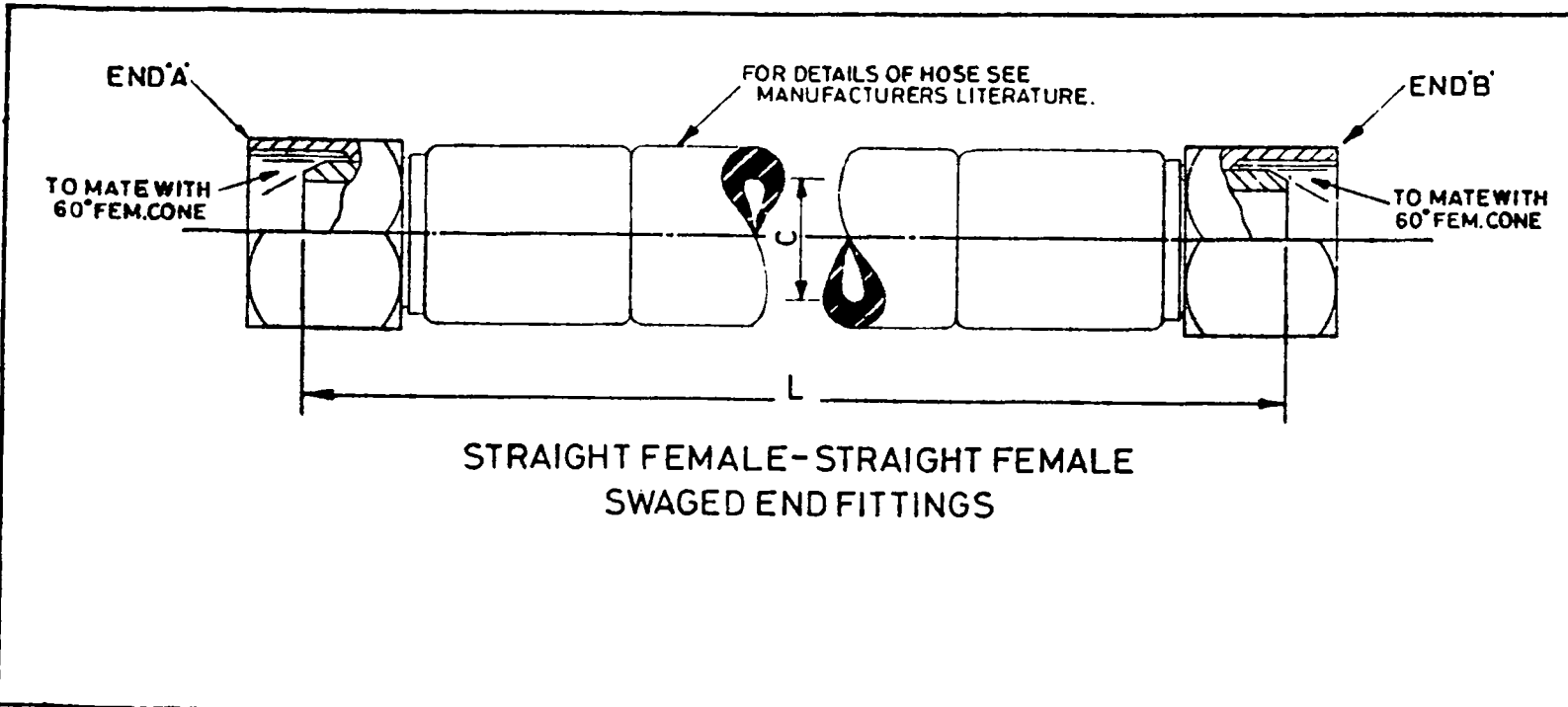
MATL:-LEADED 80/20 BRASS BS.2874-CZ104 COND.M
 ALL DIMENSIONS 0 TO 6:0.2
 OVER 6 UP TO 30:0.5
 UNLESS OTHERWISE SPECIFIED
 B.R. CAT.No. 51/16367

ISSUE LETTER	ALTERATION	ISSUES INITIALS	DATE
A	FIRST ISSUE		
B	ITEM 03 ADDED. 01 & 02 BR.CAT. Nos ADDED.		
C	ITEM 04 ADDED	PC	5/88
D	ITEM 01 Ø 12.01 WAS Ø 12 R0.5, R0.2 ADDED. ITEM 03 R0.2 WAS 1x45° CHAMFER	PC	5/88
E	ITEM 01, 03 & 04 :- OD WAS 14.3, R WERE 0.5 & 0.2	J.R.	7/88

FLEXIBLE HOSE
 FITTINGS FOR
 PRESSURE GAUGES

CHIEF MECHANICAL &
 ELECTRICAL ENGINEER
 BRITISH RAILWAYS BOARD
 STANDARDS & RATIONALIZATION
 DERBY

Scale	4:1	A	B	C	D	E
Drawing No	M:A3-9009409					
Drawn	Traced	Checked	Date			
P.S.G.				10/81		



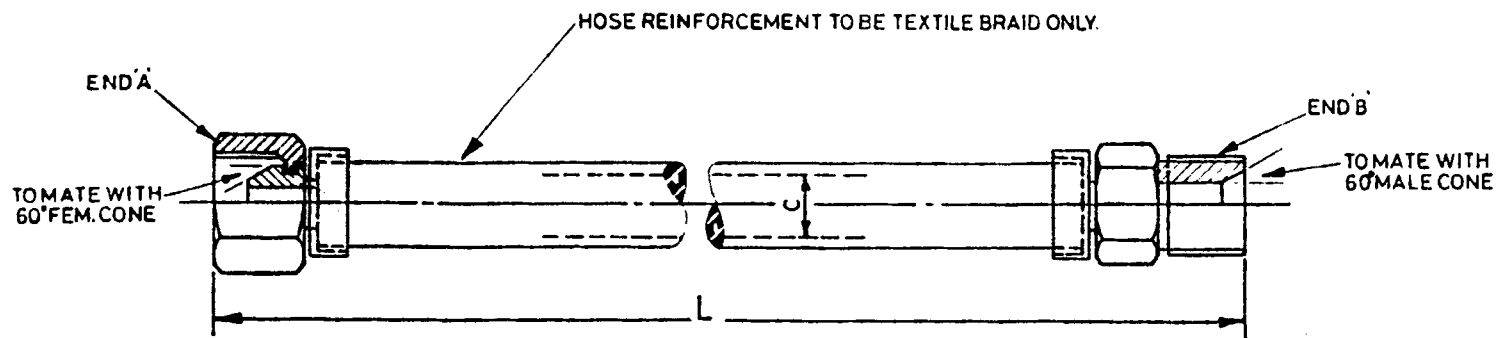
REVISION LETTER	ALTERATION	DATE
A	FIRST ISSUE	20/83
B	ITEM 01 CLASS K2 ADDED	5/16/85

ITEM No	LENGTH Lmm	BORE Cmm	END A THR'D	END B THR'D	APPROVED MANUFACTURERS PART/ASSY NUMBERS		BR CAT NUMBER	VEHICLE / CLASS
					AEROQUIP			
01	370	12.7	1/2 BSP	1/2 BSP	SH115447-08/7CS10-08/ SH115447-08/370mm DN		15/80137	141,142

**TYPE P RUBBER HOSE
(WIRE REINFORCED)
SWAGED END FITTINGS**

**CHIEF MECHANICAL &
ELECTRICAL ENGINEER
BRITISH RAILWAYS BOARD
STANDARDS & RATIONALIZATION
DERBY**

Scale	—	A	B		
Drawing No.	M-A3-9018851				
Drawn	Traced	Checked	Date		
P.S.G.	—			1/83	



STRAIGHT FEMALE - STRAIGHT MALE
SOCKETLESS END FITTINGS

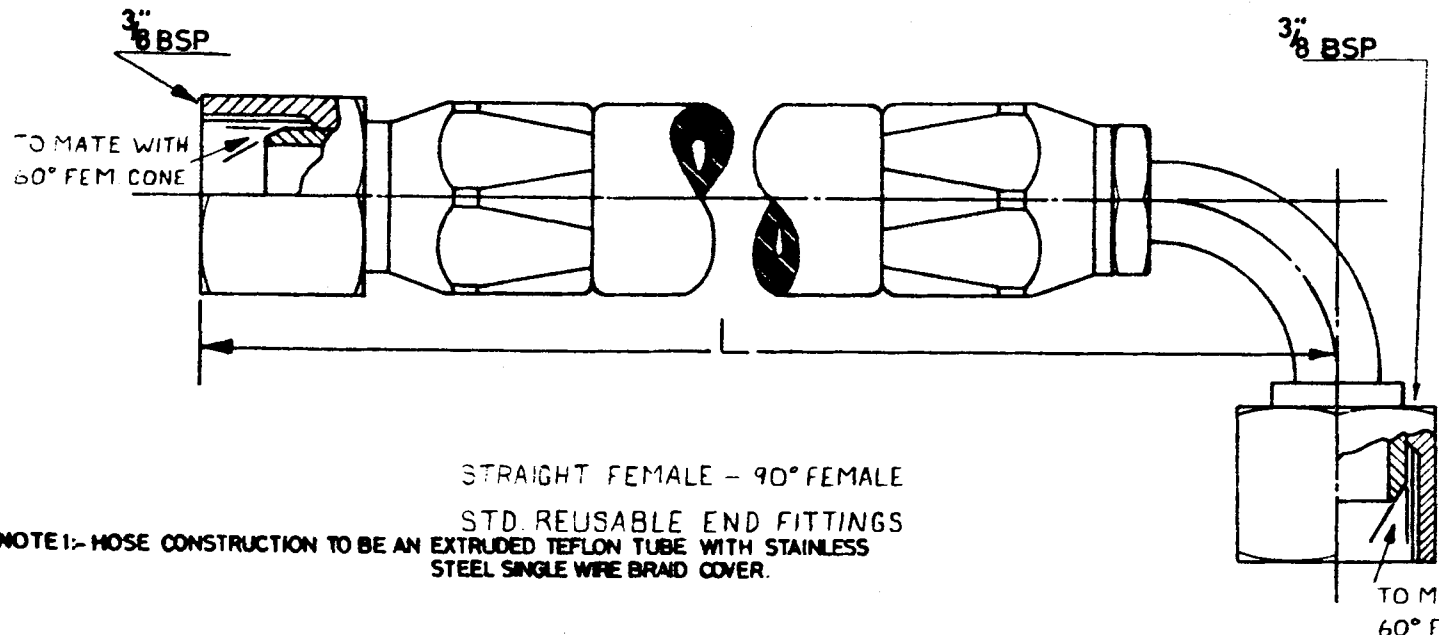
ISSUE LETTER	ALTERATION	DRAWN'S INITIALS	DATE
A	FIRST ISSUE		

ITEM No.	LENGTH Lmm	BORE Cmm	END A' THREAD	END B' THREAD	APPROVED PART/ASSY NUMBERS		B.R.CAT. NUMBER	VEHICLE / CLASS
					AERO	QUIP		
01	460	9.4	3/8 B.S.P.	3/8 B.S.P.	E7055-6/2550-6/		97/2877	313-315,254,507,508.
02	500	-	-	-	E7056-6/460mmOa		97/7760	455PH3.
					E7055-6/2550-6/			
					E7056-6/500mmOa			

TYPE 'P' RUBBER HOSE
(TEXTILE REINFORCED)
WITH SOCKETLESS FITTING

DIRECTOR OF MECHANICAL
& ELECTRICAL ENGINEERING
BRITISH RAILWAYS BOARD
MATERIAL SERVICES
DERBY

Scale	___	A		
Drawing No	M-A3-9025221			
Drawn	Traced	Checked	Date	
PSG.		P.N.	12/83	



STRAIGHT FEMALE - 90° FEMALE
 STD. REUSABLE END FITTINGS

NOTE 1:- HOSE CONSTRUCTION TO BE AN EXTRUDED TEFLON TUBE WITH STAINLESS
 STEEL SINGLE WIRE BRAID COVER.

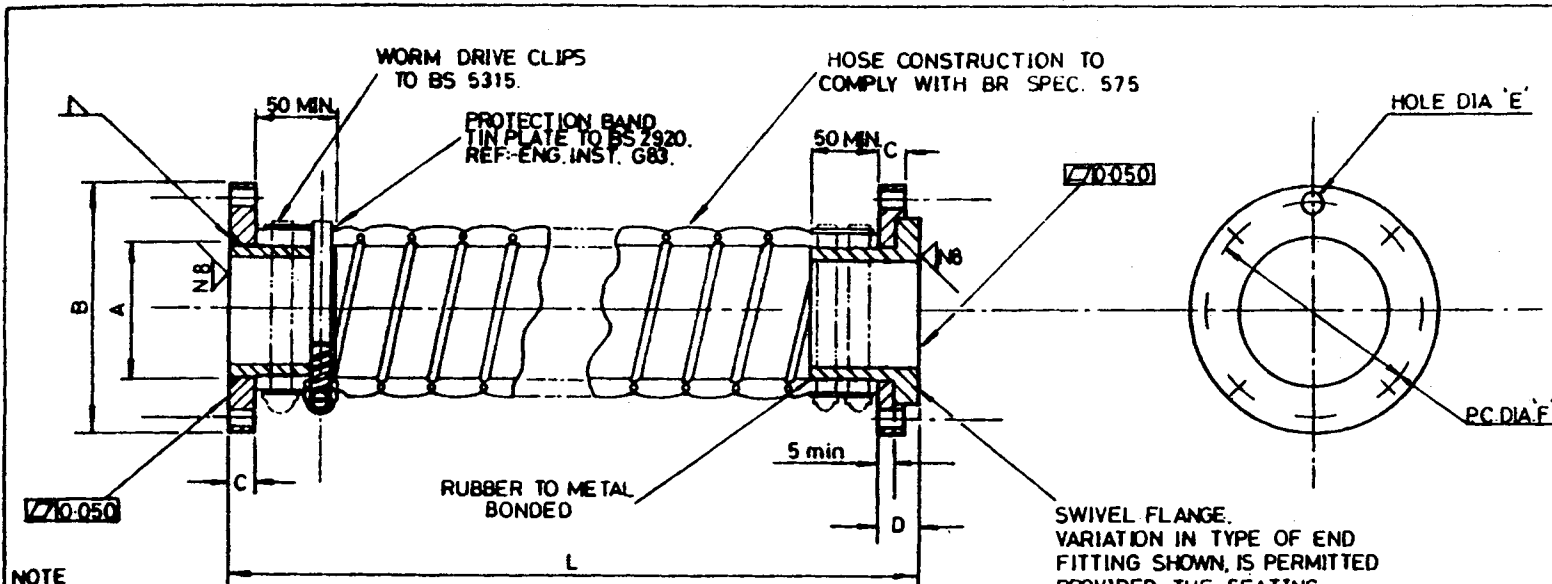
ISSUE LETTER	ALTERATION	DATE
A	FIRST ISSUE	

ITEM No.	LENGTH L mm	HOSE DATA						B.R. CAT. NUMBER	VEHICLE / CLASS
		SPECIFICATION	WORKING PRESS-BAR	TEMP. °C	REINFORCED BY	MIN BEND RADIUS mm			
01	1425	—	105	-73 to +232	SEE NOTE 1	100	51/87088	50	
02	1970	—	"	"	"	"	51/87089	50	

TYPE 'P' RUBBER HOSE
 8.1 mm BORE
 WITH REUSABLE FITTINGS

**CHIEF MECHANICAL &
 ELECTRICAL ENGINEER
 BRITISH RAILWAYS BOARD
 STANDARDS & RATIONALIZATION
 DERBY**

Scale	A		
Drawing No	M-A3-9028950		
Drawn	M.J.G	Traced	-
Checked		Date	24-7-84



NOTE

- 1 SPIGOT WALL THICKNESS TO BE 4mm MIN.
- 2 FLANGES TO BE MILD STEEL TO BS 4360 43A.
- 3 FLANGE SPIGOTS TO BE GROOVED TO AID HOSE TO METAL BONDING(3 EQUALLY SPACED 1mm RAD).
- 4 PREPARED FILLET OR STEPPED FILLET WELDS ARE SUITABLE FOR SPIGOT TO FLANGE WELDING.

ISSUE LETTER	ALTERATION	ISSUED INITIALS	DATE
A	FIRST ISSUE	GIM	10/84
B	BANDS WERE STAINLESS STEEL TO BS1449	JR	2/85
C	ITEM 02 ADDED	JR	10/85
D	FLANGE SPIGOT LENGTH SPECIFIED.	JR	10/85
E	ITEM 03 ADDED ITEM 01 DELETED.	JR	10/85

ITEM NO	LENGTH	BORE	DIMENSIONS					NO OF HOLES	HOSE DATA		HOSE ASSY WORKING PRESSURE	BR. CAT NO	VEH / CLASS
			B	C	D	E	F		WORKING PRESSURE	TEMPERATURE °C			
01													
02	900	80	180	8	9	18	146	4	2.5 BAR	125	50 PSI	15/78190	150/1
03	625	80	180	8	9	18	146	4	2.5 BAR	125	50 PSI	15/78185	150/1

SILICONE HOSE
TYPE 'P' WITH
FLANGES.

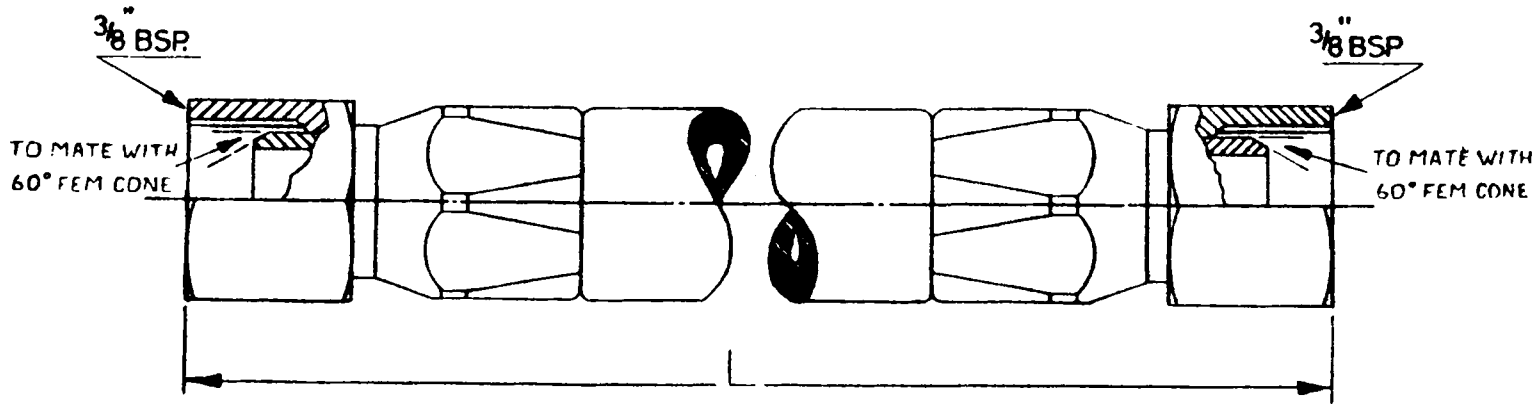
DIRECTOR OF MECHANICAL
& ELECTRICAL ENGINEERING
BRITISH RAILWAYS BOARD
DESIGN SUPPORT-GENERAL
DERBY.

Scale _____

Drawing No M-A3-9029112

A	B	C	D
E			

Drawn	Traced	Checked	Date
G.I.M.			10/84



STRAIGHT FEMALE - STRAIGHT FEMALE
STD. REUSABLE END FITTINGS

NOTE 1:- HOSE CONSTRUCTION TO BE AN EXTRUDED TEFLON TUBE WITH STAINLESS
STEEL SINGLE WIRE BRAID COVER.

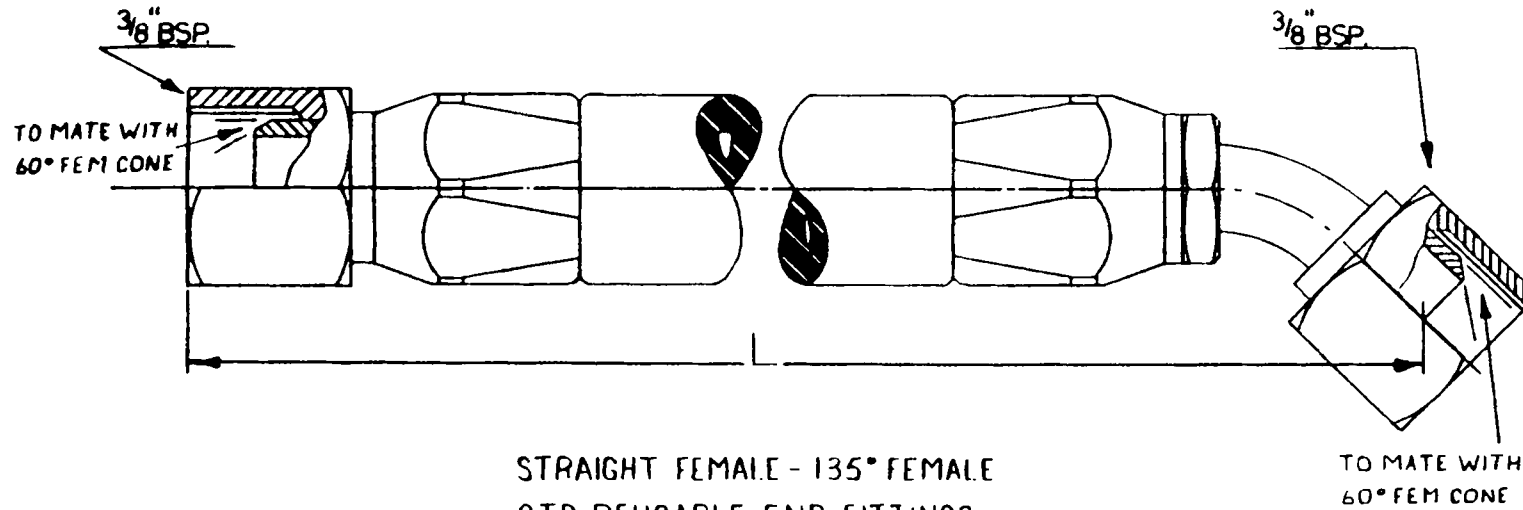
ISSUE LETTER	ALTERATION	DATE
A	FIRST ISSUE	

ITEM No.	LENGTH L mm	HOSE DATA							B.R CAT NUMBER	FITTED ON
		SPECIFICATION		WORKING PRESS-BAR	TEMP °C	REINFORCED BY	MIN BEND RADIUS mm			
		SAE	BSS							
01	330	—	—	172	-73 TO +232	SEE NOTE 1	100	880/006901	56	
02	1225	—	—	"	" " "	" " "	"	880/006902	56	
03	675	—	—	"	" " "	" " "	"	880/006903	56	

TYPE 'P' RUBBER HOSE
8.1 mm BORE
WITH REUSABLE FITTINGS

DIRECTOR OF MECHANICAL
& ELECTRICAL ENGINEERING.
BRITISH RAILWAYS BOARD.
DESIGN SUPPORT-GENERAL.
DERBY.

Scale	A			
Drawing N ^o	M-A3-8800069			
Drawn	Traced	Checked	Date	
R. S. L.			8/85	



STRAIGHT FEMALE - 135° FEMALE
STD REUSABLE END FITTINGS

NOTE 1:- HOSE CONSTRUCTION TO BE AN EXTRUDED TEFLON TUBE WITH STAINLESS
STEEL SINGLE WIRE BRAID COVER.

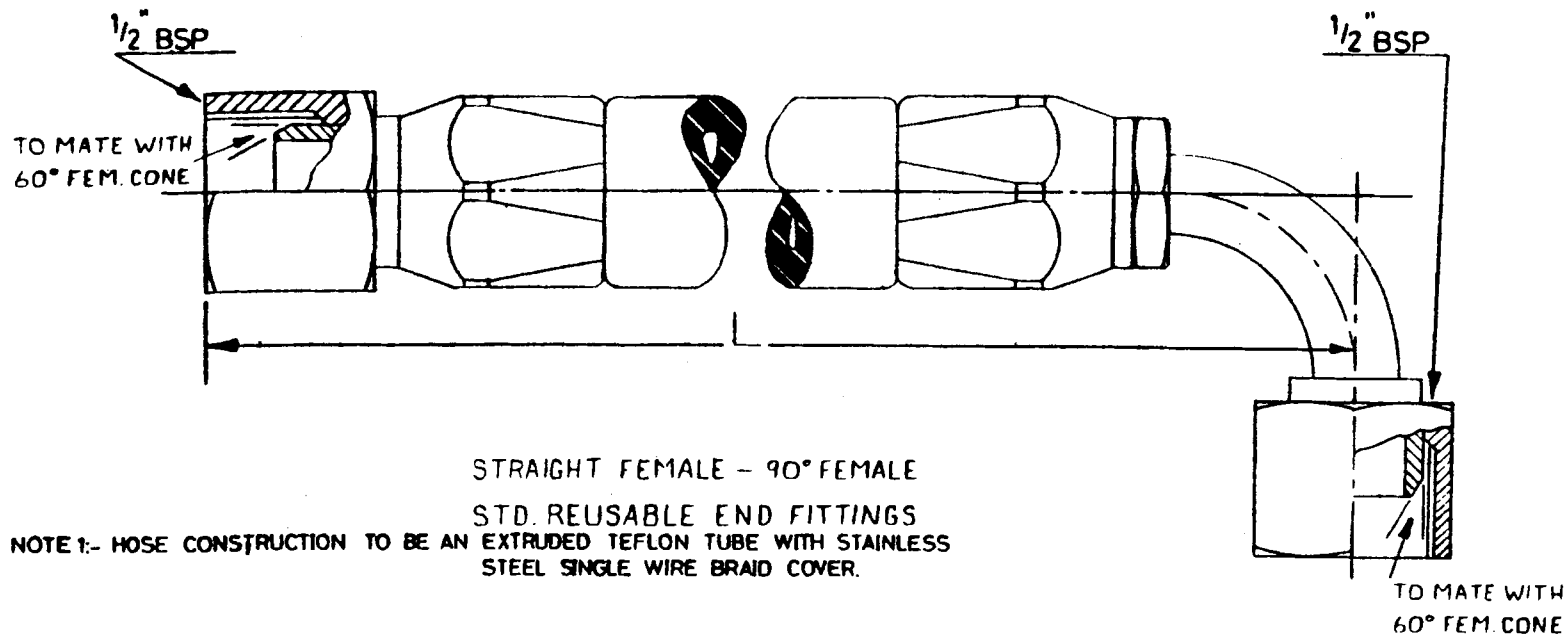
ISSUE LETTER	ALTERATION	BY	DATE
A	FIRST ISSUE		

ITEM No	LENGTH Lmm	HOSE DATA						B R CAT NUMBER	FITTED ON
		SPECIFICATION		WORKING PRESS-BAR	TEMP °C	REINFORCED BY	MIN BEND RADIUSmm		
		SAE	BSS						
01	920	---	---	172	-73to+232	SEE NOTE 1	100	880/007001 56	
02	900	---	---	"	" "	" "	"	880/007002 56	
03	205	---	---	"	" "	" "	"	880/007003 56	

TYPE 'P' RUBBER HOSE
81 mm BORE
WITH REUSABLE FITTINGS

DIRECTOR OF MECHANICAL & ELECTRICAL ENGINEERING
BRITISH RAILWAYS BOARD
DESIGN SUPPORT-GENERAL
DERBY

Scale	A			
Drawing No M-A3-8800070				
Drawn	Traced	Checked	Date	
R. [Signature]			8/85	



STRAIGHT FEMALE - 90° FEMALE

STD. REUSABLE END FITTINGS

NOTE 1:- HOSE CONSTRUCTION TO BE AN EXTRUDED TEFLON TUBE WITH STAINLESS STEEL SINGLE WIRE BRAID COVER.

ITEM No.	LENGTH L mm	HOSE DATA					B.R. CAT. NUMBER	FITTED ON
		SPECIFICATION		WORKING PRESS-BAR	TEMP °C	REINFORCED BY			MIN BEND RADIUS mm
		SAE	BSS					
01	130	—	—	138	-73 TO +232	SEE NOTE 1	135	880/007101 56

ISSUE LETTER	ALTERATION	DESIGNERS INITIALS	DATE
A	FIRST ISSUE		

TYPE 'P' RUBBER HOSE
10.6 mm BORE
WITH REUSABLE FITTINGS

DIRECTOR OF MECHANICAL & ELECTRICAL ENGINEERING.
BRITISH RAILWAYS BOARD.
DESIGN SUPPORT-GENERAL.
DERBY.

Scale: _____ A

Drawing No: M-A3-8800071

Drawn	Traced	Checked	Date
R <i>adp</i>	-		8/85

APPENDIX A

APPROVED SUPPLIERS

MAIN SUPPLIERS

DISTRIBUTION NETWORK OF MAIN SUPPLIERS

<p>AEROQUIP (UK) Ltd Aeroquip-Hyline Division Studley Road Redditch, Worcester</p>	<p>Trist Draper Ltd 816-818 Bath Rd Bristol BS4 5LH</p>	<p>Trist Draper Ltd 4 Tamar Rd Feeder Road Bristol BS2 OTX</p>	<p>Trist Draper Ltd Unit 1 Block A Herbert Street Cardiff CF1 5AY</p>	<p>Trist Draper Ltd Grace Road Marsh Barton Exeter EX2 8PM</p>	<p>Trist Draper Ltd 52 Strathmore Road off Balmore Rd Glasgow N2</p>	<p>Trist Draper Ltd 24 Croydon St. off Domestic St Leeds LS11 9RT</p>
	<p>Trist Draper Ltd Middlemore Ind Est, Middlemore Rd, Smethwick Warley, W. Mids</p>	<p>Trist Draper Ltd Petre Drive off Petre St Sheffield S4 8EG</p>	<p>Trist Draper Ltd 1 Belvidere Terr Northam Southampton SO1 1QR</p>	<p>Trist Draper Ltd Unit 10 Perivale Ind Park Horsenden Lane Perrivale Middx</p>	<p>Trist Draper Ltd Unit 7 Murdock Lane Monton Lane Ind Est, Bedford</p>	<p>Trist Draper Ltd 36 Cricklade Road Swindon SN2 6AA</p>
	<p>Trist Draper Ltd 13 Melton St Leicester LE1 3NB</p>	<p>Trist Draper Ltd Unit 2 Galley Hill Ind Est London Road Swanscombe Kent</p>	<p>Trist Draper Ltd 7 Javelin Road Airport Ind. Est Norwich NOR 9SL</p>	<p>Trist Draper Ltd Top-Dog House Carnarvon St Cheetham Manchester M3 4LY</p>	<p>Trist Draper Ltd Penn St Newcastle-on-Tyne NE4 7BG</p>	<p>Trist Draper Ltd Unit 17 Woodlands Drive Kirkhill Ind. Est, Dyce Aberdeen</p>
	<p>Trist Draper Ltd 4 Glendower St Brasenose Rd Ind. Est Liverpool 20</p>					

MAIN SUPPLIERS		DISTRIBUTION NETWORK OF MAIN SUPPLIERS				
HI-FLEX INTERNATIONAL P.O. Box 2 Salisbury Wilts.	Hi-Flex Northern Ltd Copse Industrial Estate Fleetwood Lancs	Hi-Flex Northern Ltd Cobden Street Pendleton Manchester 6	Oswald Hydraulics Ltd Masters Lane Halesowen Worcester B62 9HL	G.E. Turner Hydraulics Ltd Norwich Road Newport Rd Industrial Est Cardiff	Hydraulic Suppliers (Scotland) Ltd 4 Castle Bank Crescent Partick Glasgow	N.E. Counties Hydraulics Ltd Barmoor Terr Ryton Co Durham
	Eastern Counties Hydraulics Ltd 368 Savile St Sheffield 4	Hi Flex (Yorkshire) Ltd Unit 5 Calder Vale Road Horbury Junction Wakefield	Interlock Couplings (Southern) Ltd 2,4 & 6 Lillieshall Rd Clapham London SW4	Hi Flex (South Eastern) Ltd Unit 4 Industrial Est Somersham Road St. Ives Hunts	Western Counties Hydraulics Ltd 6 Sommerville Rd Horfield Bristol BS7 9AA	
DUNLOP LTD Hydraulics Division Kingsway, Team Valley Est Gateshead NE8 1YR Co. Durham	Dunlop Ltd 4th Avenue Team Valley Est Gateshead NE8 1YR Co. Durham	Dunlop Ltd Moorside Road Swinton M27 3TN	Dunlop Ltd 28 Bartholomew St. Birmingham 5	Dunlop Ltd Crown Works Clayton Rd Hayes Middlesex		

LIST OF HOSE DISTRIBUTORS

<p>EUROPOWER HYDRAULICS LTD High Street Market Weighton York YO4 3AD</p>	<p>Sheffield Branch Holbrook Industrial Estate Halfway Sheffield.</p>	<p>Bristol Hydraulics Ltd Unit 6 Rovers Hill Trading Estate Rovers Hill Bedminster Bristol.</p>	<p>Geo. Boyd & Co Ltd 300 Crownpoint Road Glasgow.</p>
	<p>E. Donaldson & Son Muirdrum Carnoustie Angus.</p>	<p>Euro (Fluid) Power 71 Bethesda Street Hanley Stoke-on-Trent</p>	<p>Hydraulic Equipment Supply Co 419 New Kings Road London SW6 4RW.</p>
	<p>Hydraulic Equipment Supply Co Railway Approach (Adjoining Worthing Central Station, Worthing, Sussex)</p>	<p>Hydraulic Supply Service Ltd Unit 6 Gadway House Leigh Street, High Wycombe Bucks.</p>	<p>Hydraulics (Ireland) Ltd Unit H1 Knockmore Industrial Estate Lisburn Co Antrim, N. Ireland</p>
	<p>Hydraulics (Ireland) Ltd Unit 10 Cookstown Industrial Estate Belgard Road Tallaght Co Dublin</p>		<p>Norton Hydraulics Ltd Factory 4 Kenninghall Road Edmonton N18</p>

LIST OF HOSE DISTRIBUTORS (continued)

	Norton Hydraulics Ltd Station Works Station Approach Braintree Essex	Norton Hydraulics (Midland) Ltd Arch 1 Shaw Passage Off Park Street Birmingham 5	Pearson Hydraulics Ltd Allenby Road Industrial Estate Lincoln	
	Pearson Hydraulics Ltd 24 Curtis Road Norwich	Ribble Fluid Power Ltd 235 Blackpool Rd Preston	Yorkshire Hydraulics Ltd 88 Main Street Fulford York	
Winster Hose Ltd Stainsacre Lane Whitby N. Yorkshire YD22 4NL	Winster Hose Ltd Unit 2 Little Tennis Street White City Ind Est Nottingham	Winster Hose Ltd Queensway Northway Walworth Ind Est Andover Hants	Winster Hose Ltd Unit 255 Walton Summit Centre Bamber Bridge Preston Lancs	Winster Hose Ltd Unit K2 Tyne Tunnel Trading Estate North Shields
	Winster Hose Ltd Unit 52 Monckton Road Ind Est Wakefield Yorks	Winster Hose Ltd Unit 4 Hagmill Road Shawhead Ind Est Coatbridge Lanarkshire		