

WOSS 656/10

British Railways Board

Director of Mechanical and Electrical Engineering

**Windscreen Wiper
Motor Control Valve
(Repair)**

Trico Type F1430-1

WORKSHOP OVERHAUL STANDARD SPECIFICATION



This is a proprietary specification issued by:

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REVISION RECORD

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

Revision No	Date	Inserted by

Revision	Date	Inserted by

This Specification applies to equipment fitted to the vehicle types indicated 'X' below. The specification shall only be implemented when authorised by the appropriate WOSS or by the Business Engineer in the case of special application.

LOCOMOTIVES

03		73	X
08		81	X
09		85	X
20	X	86	
25	X	87	
26	X	88	
27	X	89	
31	X	90	
33	X	91	
37	X	92	
43			
45	X		
47	X		
50	X		
56			
58			
59			
60			

DMU's

101	X
104	X
107	
108	X
110	X
111	X
114	X
115	X
116	X
117	X
118	X
119	X
120	X
121	X
122	X
127	
128	X
140	
141	
142	
143	
144	
150	
151	
154	
155	
156	
157	
158	
165	

EMU's

302		411	
303	X	412	
304	X	413	
305	X	414	
307	X	415	
308		416	
309		419	
310		421	X
311		422	X
312		423	X
313		432	X
314		438	X
315		442	
317		455	
318		465	
319		466	
320		485	
321		486	
504	X	487	
507		488	
508		489	

COACHING STOCK

Mk 1	
Mk 1 Catering	
Mk 2, 2a - c	
Mk 2d - e	
Mk 2f	
Mk 2 DBSO	
Mk 3a	
Mk 3b	
Mk 3 Catering	
Mk 3 (HST)	
Mk 3 (HST) Catering	
Mk 3 SLE and SLEP	
Mk 4 IC225	
DVT IC225	
DVT 125	
Non Passenger	

DEMU's

201	
202	
203	
204	
205	
207	
210	

WAGONS

PRIVATE OWNER VEHICLES

DEPARTMENTAL VEHICLES

WINDSCREEN WIPER MOTOR CONTROL VALVE
TRICO TYPE F1430-1

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REFERENCE DOCUMENTS

WOSS 100/3 - Inspection Procedure

MATERIAL LIST

P T F E Grease - Lacerta CL2XTF - available in 12 1/2 kilo kegs
from Century Oils, Century Works, Century Street,
Hanley Stoke - on - Trent. ST1 5HU.

Plug - 8/12210

Polythene Bag 102 x 152 - B R 1919/29

INTRODUCTION

The F1430-1 control valve is used to operate the Trico Ltd FPK375 wiper motor and its later derivative, FPH375 and FPH375(S), on older BR rolling stock.

This equipment is now obsolete and new ones are no longer available from Trico Ltd.

Control valves shall be salvaged from vehicles going for scrap to provide a serviceable supply and also where applicable used as spare parts.

New spare parts, as listed on page 3, are being purchased from Trico on a once and for all order, after which they will cease to be available. A set of drawings have been supplied by Trico for use as necessary, to manufacture any spares which become unavailable.

SECTION 1. REPAIR PROCEDURE

1. Dismantling. (See Fig. 1)

- 1.1 Before dismantling, mark the cover 500456 and the main body 509369, so that they can be reassembled in the same position.
- 1.2 Remove the six screws round the cover and dismantle the control valve. Discard gasket 500461, 'O' ring 766504, filter 500462, slide valve 510785, slide valve plate 510786, conical spring 750921, lockwasher 739826 and all spring washers.

2. Cleaning and Examination

- 2.1 After dismantling, all component parts shall be washed in a cleaning liquid according to BR procedures and dried with a lint free cloth.
- 2.2 After cleaning examine shaft and lever assembly 500464, if distorted or fractured discard. All other components shall be examined for wear or damaged.

3. Reassembly

- 3.1 Renew any worn or damaged parts.
- 3.2 Use new slide valve 510785, slide valve plate 510786, gasket 500461, conical spring 750921, 'O' ring 766504, washers 732805 and 735263, also filter 500462.
- 3.3 Smear a little PTFE based grease on the working surface of synthetic rubber slide valve 510785 and engage with slide valve plate 510786, fit into main body.
- 3.4 Fit shaft and lever assembly 500404, with 'O' ring 766504, into cover 500456. Fit gasket 500461 to cover.
- 3 5 Fit cover,with shaft and lever assembly, into body, ensuring that the shaft and lever assembly engage correctly in the slide valve plate. Fit cover retaining screws using new spring washers.

ITEM LIST FOR FIGURE 1

F1430-1 CONTROL VALVE - SPARE PARTS LIST				
ITEM NO.	DESCRIPTION	TRICO PT. NO.	BR CAT NO.	QTY PER MOTOR
1	Control Knob	500452	14/92045	1
2	Set Screw (For Control Knob)	500453	14/93394	1
3	Cover	500456	14/91343	1
4	Slide Valve) (Was 500459)	510785	61/42409	1
5	Slide Valve Plate) (Was 500460)	510786	61/42410	1
6	Gasket)	500461	14/91584	1
7	Conical Spring)	750921	61/42411	1
8	Repair Kit VK20 Items 4, 5, 6 & 7	771351	14/1225	1
9	Filter	500462	14/93364	1
10	Needle Valve	500463	14/93903	1
11	Shaft and Lever	500464	14/93487	1
12	Body Sub-Assembly Includes items 9,13,16,21,22 & 25	509369	14/90597	1
13	Washer	730353	14/94088	2
14	Washer	732805	14/9409	2
15	Brass Washer	732860	14/94092	1
16	Washer	735263	14/94087	3
17	Lockwasher	739826	14/92204	1
18	Nut	746125	14/9437	1
19	Nut	749227	14/92440	1
20	'O' Ring	766504	10/52329	1
21	Comp Body	768261	14/90599	3
22	1856-6 Screw	704606	14/93396	1
23	No. 8-32 Fil. Head Screw	707412	61/41648	6
24	2328-7 Lockwasher	739552	14/92200	6
25	Control Body	500458	-	1
	Control Valve Complete (Without Control Knob)	500561	61/3510	
	Control Knob Assembly (Items 1 and 2)	515405		

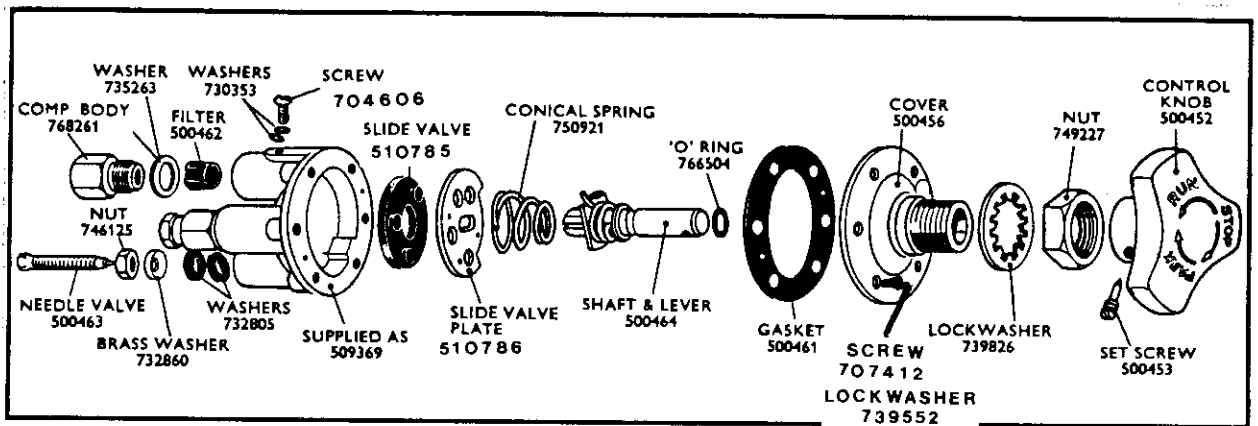


FIG 1 - Control Valve - Exploded View

SECTION 2. TEST SPECIFICATION

1. Testing of Control Valve

- 1.1 A test rig giving an air pressure of at least 140 psi (9.7 bar) shall be provided.
- 1.2 Gently bottom needle valve 500463, then unscrew half a turn, tighten lock nut. Connect air supply (140 psi) to the inlet port. Put the control valve in the "OFF" position, switch on air supply and completely submerge the valve in water. Check that there are no air leaks, especially at the needle valve i.e. no bubbles rising to the surface of the water.
- 1.3 Remove from water and turn operating knob to full "RUN" position. Air should blow from both "RUN" and "PARK" outlets.
- 1.4 Turn knob to "PARK" position, air should blow from "RUN" outlet only.
- 1.5 After completion of all tests switch off air supply and disconnect air pipe. Fit plugs, Cat No 8/12210, to three air connections to prevent ingress of dirt.
- 1.6 Remove control knob, ensure that valve is dry, seal in a polythene bag 102 x 152 B.R. 1919/29, stock under B R Cat No 61/3510

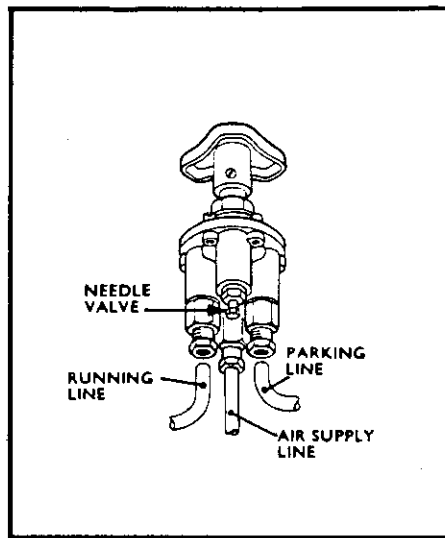


Fig 2 - Air Pipe Connection