

CHAPTER 3 MAIN AND NOSE UNDERCARRIAGE AND DOORS

(Completely revised)

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General

1. For wear limits for undercarriage legs, jacks, etc., reference should be made to the appropriate accessory manual or leaflet. The nose and main undercarriage, undercarriage doors, and locking mechanism should be adjusted as shown in Section 3, Chapter 5 of the appropriate Volume 1; where backlash occurs and the adjustments cannot be made, or the satisfactory operation of the system cannot be ensured, worn parts should be renewed even though

they may not have exceeded the maximum permissible worn dimensions.

Nose undercarriage door locks

2. Any wear in the lock is overcome only by complete renewal of the lock (Pt.No. B.219281).

Main undercarriage door locks

3. Any wear in the locks is overcome only by complete renewal of the lock concerned (Pt.No. B.210757).

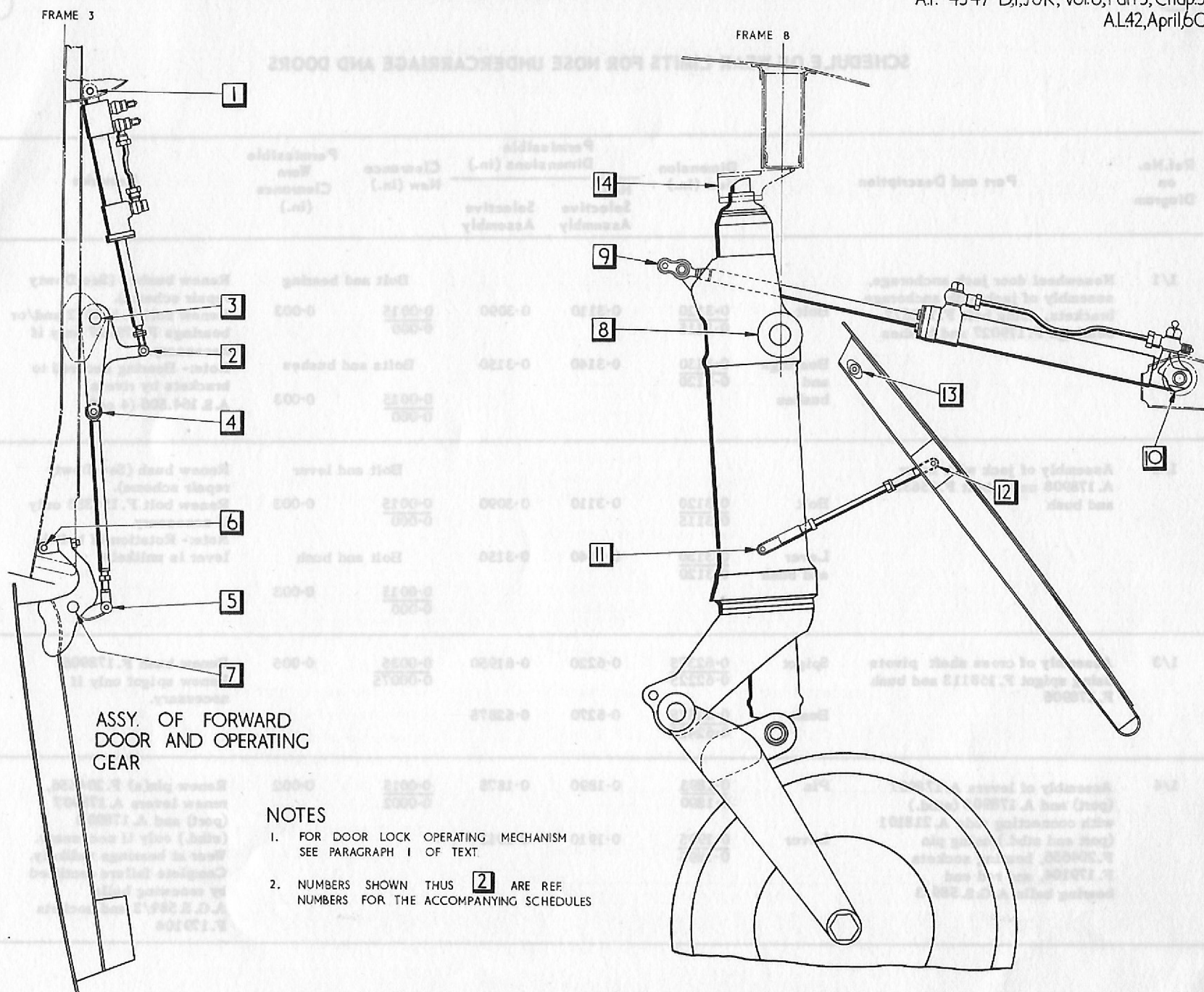


FIG. 1. BEARING LOCATION DIAGRAM - NOSE UNDERCARRIAGE AND DOORS

RESTRICTED

SCHEDULE OF WEAR LIMITS FOR NOSE UNDERCARRIAGE AND DOORS

Ref.No. on Diagram	Part and Description	Dimension New (in.)	Permissible Dimensions (in.)		Clearance New (in.)	Permissible Worn Clearance (in.)	Remarks	
			Non- Selective Assembly	Selective Assembly				
1/1	Nosewheel door jack anchorage, assembly of jack with anchorage brackets, using bolt F.152672, bearings F.179027 and bushes	Bolt	$\frac{0.3120}{0.3115}$	0.3110	0.3090	$\frac{0.0015}{0.000}$	0.003	Renew bushes (See Dowty repair scheme). Renew bolt F.152672 and/or bearings F.179027 only if necessary. Note:- Bearing secured to brackets by rivets A.S.164.506 (4 off)
		Bearings and bushes	$\frac{0.3130}{0.3120}$	0.3140	0.3150	$\frac{0.0015}{0.000}$	0.003	
1/2	Assembly of jack with lever A.178908 using bolt F.156330 and bush	Bolt	$\frac{0.3120}{0.3115}$	0.3110	0.3090	$\frac{0.0015}{0.000}$	0.003	Renew bush (See Dowty repair scheme). Renew bolt F.156330 only if necessary. Note:- Rotation of bolt in lever is unlikely
		Lever and bush	$\frac{0.3130}{0.3120}$	0.3140	0.3150	$\frac{0.0015}{0.000}$	0.003	
1/3	Assembly of cross shaft pivots using spigot F.168113 and bush F.178906	Spigot	$\frac{0.62375}{0.62225}$	0.6220	0.61950	$\frac{0.0035}{0.00075}$	0.005	Renew bush F.178906. Renew spigot only if necessary.
		Bush	$\frac{0.62575}{0.62450}$	0.6270	0.62875			
1/4	Assembly of levers A.178907 (port) and A.178908 (stbd.) with connecting rods A.218101 (port and stbd.) using pin F.204656, bearing sockets F.179104, and rod end bearing balls A.G.S.589/3	Pin	$\frac{0.1893}{0.1890}$	0.1890	0.1875	$\frac{0.0015}{0.0002}$	0.002	Renew pin(s) F.204656, renew levers A.178907 (port) and A.178908 (stbd.) only if necessary. Wear at bearings unlikely. Complete failure rectified by renewing balls A.G.S.589/3 and sockets F.179104
		Lever	$\frac{0.1905}{0.1895}$	0.1910	0.1913			

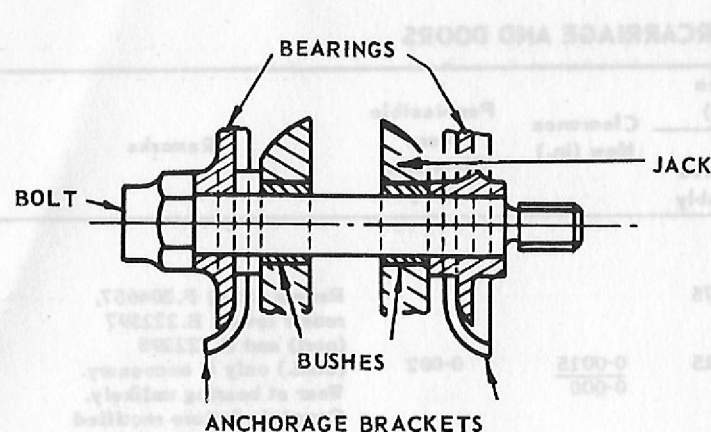


FIG.1/1

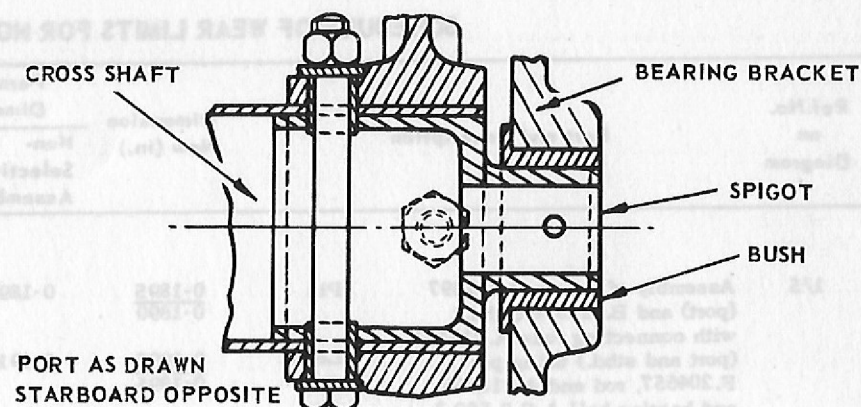


FIG.1/3

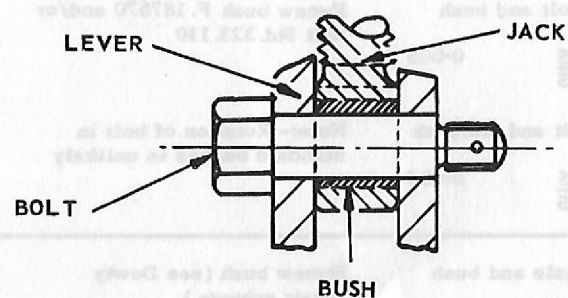


FIG.1/2

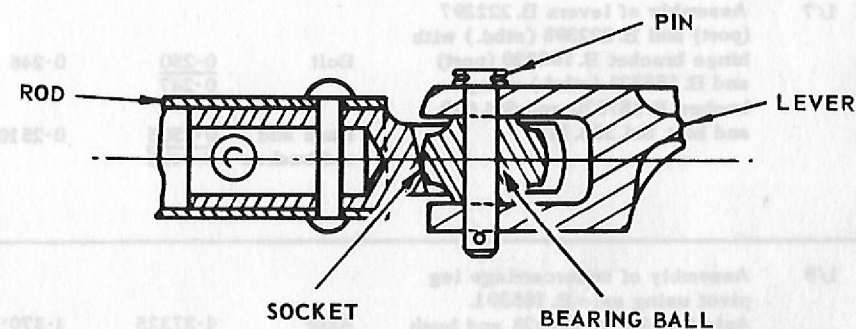


FIG.1/4

DETAILS FOR NOSE UNDERCARRIAGE AND DOORS

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SCHEDULE OF WEAR LIMITS FOR NOSE UNDERCARRIAGE AND DOORS

Ref.No. on Diagram	Part and Description	Dimension New (in.)	Permissible Worn Dimensions (in.)		Clearance New (in.)	Permissible Worn Clearance (in.)	Remarks
			Non- Selective Assembly	Selective Assembly			
1/5	Assembly of levers B.222397 (port) and B.222398 (stbd.) with connecting rods A.218101 (port and stbd.) using pin F.204657, rod end A.218085 and bearing ball A.G.S.589.3	Pin	$\frac{0.1895}{0.1890}$	0.1890	0.1875		Renew pin(s) F.204657, renew levers B.222397 (port) and B.222398 (stbd.) only if necessary. Wear at bearing unlikely. Complete failure rectified by renewing balls A. G. S. 589.3
		Lever	$\frac{0.1905}{0.1895}$	0.1910	0.1915	$\frac{0.0015}{0.000}$	
1/6	Assembly of front door hinge using hinge pin F.170584, bush F.187682 and bearing F.170585.	Pin	$\frac{0.3120}{0.3115}$	0.3110	0.3090	$\frac{0.0015}{0.000}$	Renew bush F.187682, renew pin F.170584. Renew bearing F.170585 only if necessary. Note:- Bearing secured to structure by rivets A.S.164.406 (8 off)
		Bush and bearing	$\frac{0.3130}{0.3120}$	0.3140	0.3150	$\frac{0.0015}{0.000}$	
1/7	Assembly of levers B.222397 (port) and B.222398 (stbd.) with hinge bracket B.188320 (port) and B.188321 (stbd.) using bushes F.187670 and Std.608.1 and bolt Std.323.110	Bolt	$\frac{0.250}{0.247}$	0.246	0.2445	$\frac{0.0035}{-0.0005}$	Renew bush F.187670 and/or bolt Std.323.110
		Bush and std.bushes	$\frac{0.2505}{0.2495}$	0.2510	0.2550	$\frac{0.0035}{-0.0005}$	Note:- Rotation of bolt in standard bushes is unlikely
1/8	Assembly of undercarriage leg pivot using axle B.186301. Axle blocks A.164928 and bush	Axle	$\frac{1.37325}{1.37150}$	1.3705	1.36875	$\frac{0.00425}{0.0015}$	Renew bush (see Dowty repair scheme.) Renew axle B.186301 only if necessary
		Axle block	$\frac{1.3760}{1.3745}$	1.3765	1.37925		
		Bush	$\frac{1.37575}{1.37475}$	1.3765	1.37925	$\frac{0.0045}{0.00125}$	

RESTRICTED

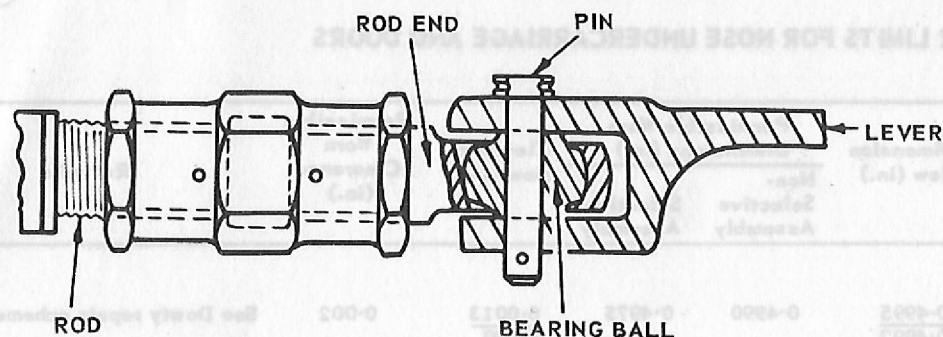


FIG.1/5

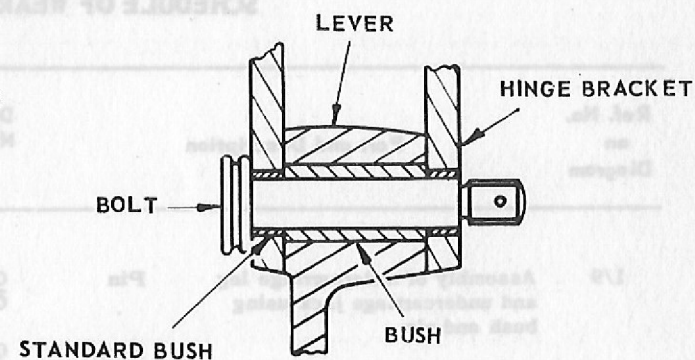


FIG.1/7

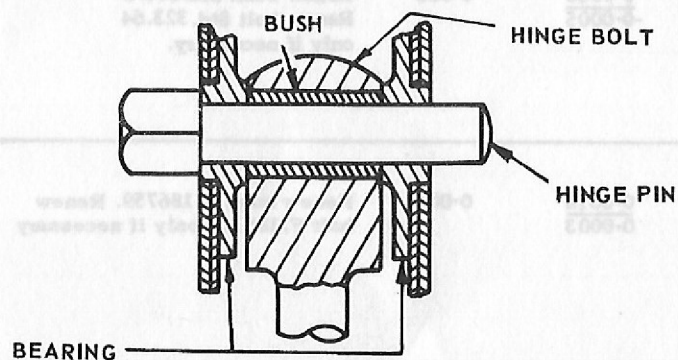


FIG.1/6

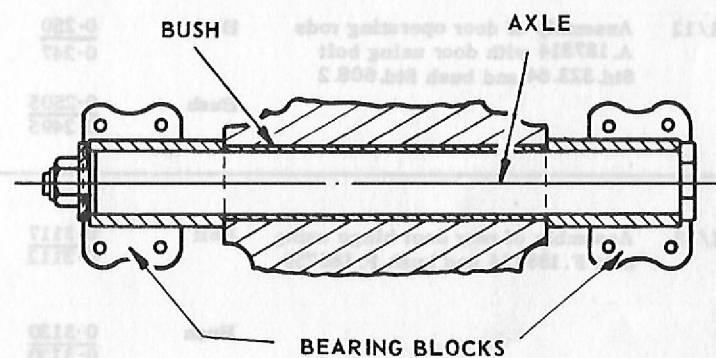


FIG.1/8

DETAILS FOR NOSE UNDERCARRIAGE AND DOORS

SCHEDULE OF WEAR LIMITS FOR NOSE UNDERCARRIAGE AND DOORS

Ref. No. on Diagram	Part and Description		Dimension New (in.)	Permissible Worn Dimensions (in.)		Clearance New (in.)	Permissible Worn Clearance (in.)	Remarks
				Non- Selective Assembly	Selective Assembly			
1/9	Assembly of undercarriage leg and undercarriage jack using bush and pin	Pin	$\frac{0.4995}{0.4992}$	0.4990	0.4975	$\frac{0.0013}{0.000}$	0.002	See Dowty repair scheme
		Bush	$\frac{0.5005}{0.4995}$	0.5010	0.5015			
1/10	Assembly of undercarriage jack anchorage using bolt F.186304 and bush	Bolt	$\frac{0.4995}{0.4992}$	0.4990	0.4975	$\frac{0.0013}{0.000}$	0.002	Renew bush (see Dowty repair scheme). Renew bolt F.186304 only if necessary
		Bush	$\frac{0.5005}{0.4995}$	0.5010	0.5015			
1/11	Assembly of door operating rods A.187814 with undercarriage leg using bush Std.608.2	Pin	$\frac{0.249}{0.248}$	0.2475	0.2455	$\frac{0.0025}{0.0005}$	0.004	Renew bush Std.608.2. For details of pin see Dowty repair scheme
		Bush	$\frac{0.2505}{0.2495}$	0.2515	0.2530			
1/12	Assembly of door operating rods A.187814 with door using bolt Std.323.64 and bush Std.608.2	Bolt	$\frac{0.250}{0.247}$	0.2465	0.2445	$\frac{0.0035}{0.0005}$	0.005	Renew bush Std.608.2 Renew bolt Std.323.64 only if necessary.
		Bush	$\frac{0.2505}{0.2495}$	0.2515	0.2550			
1/13	Assembly of rear door hinge using bolt F.188114 and bush F.186759	Bolt	$\frac{0.3117}{0.3112}$	0.3110	0.3090	$\frac{0.0018}{0.0003}$	0.003	Renew bush F.186759. Renew bolt F.188114 only if necessary
		Bush	$\frac{0.3130}{0.3120}$	0.3140	0.3147			
1/14	Nose undercarriage unit anchorage using undercarriage stop fitting B.177144					Clearance between stop and plunger (Dimension('A')) must not be less than 0.001		Renew undercarriage stop fitting B.177144

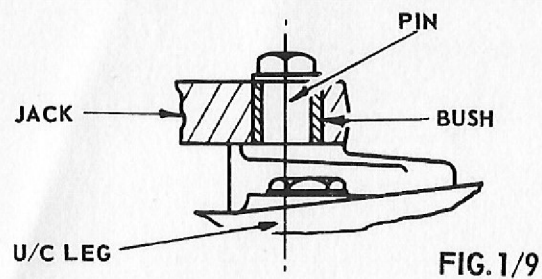


FIG. 1/9

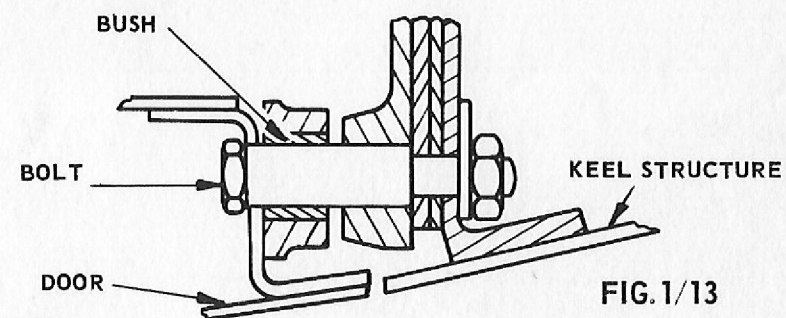


FIG. 1/13

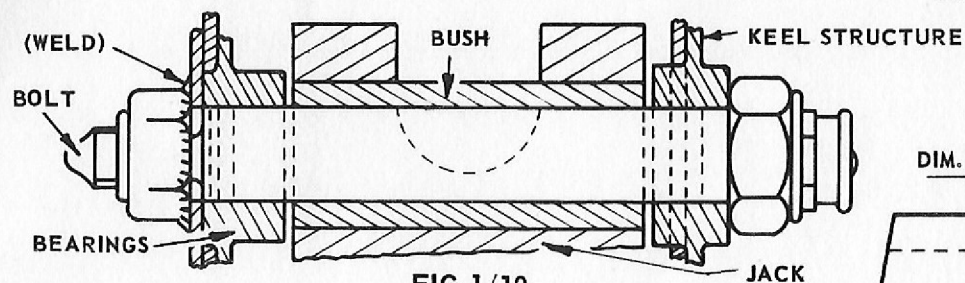


FIG. 1/10

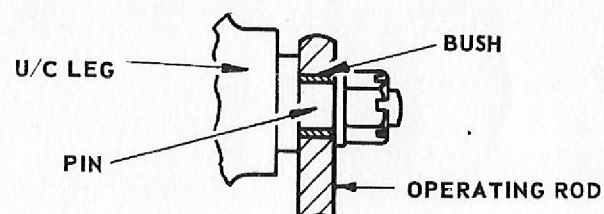


FIG. 1/11

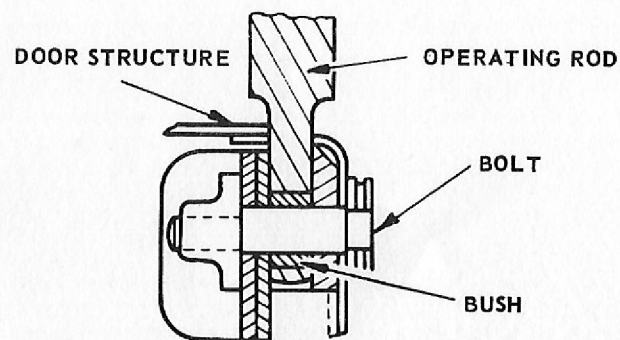


FIG. 1/12

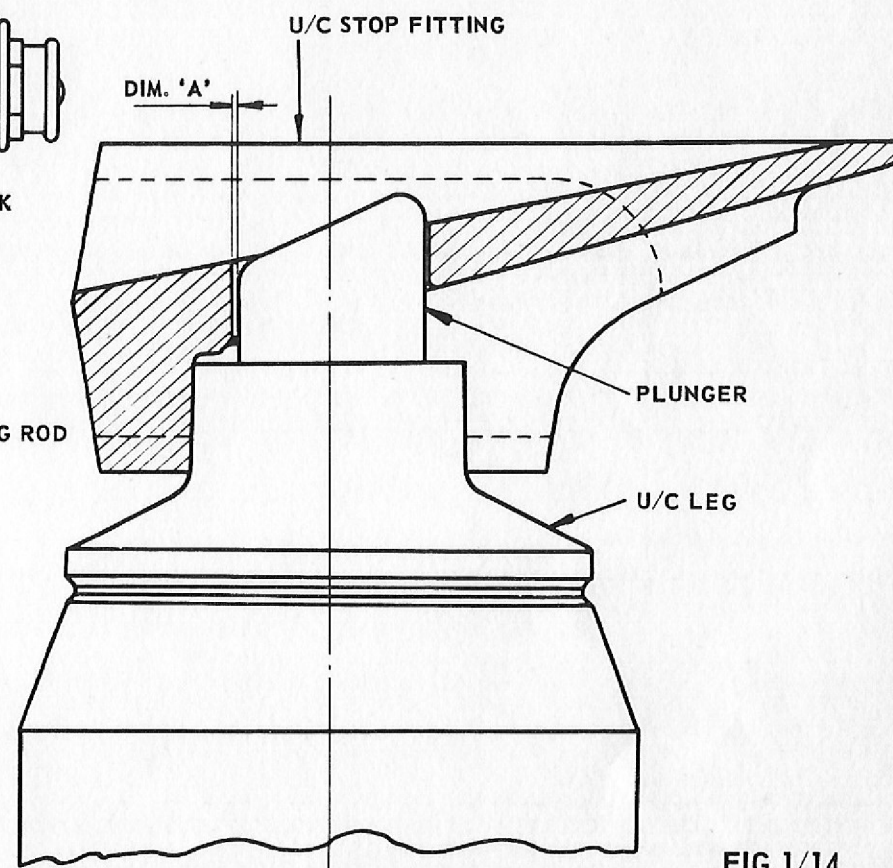
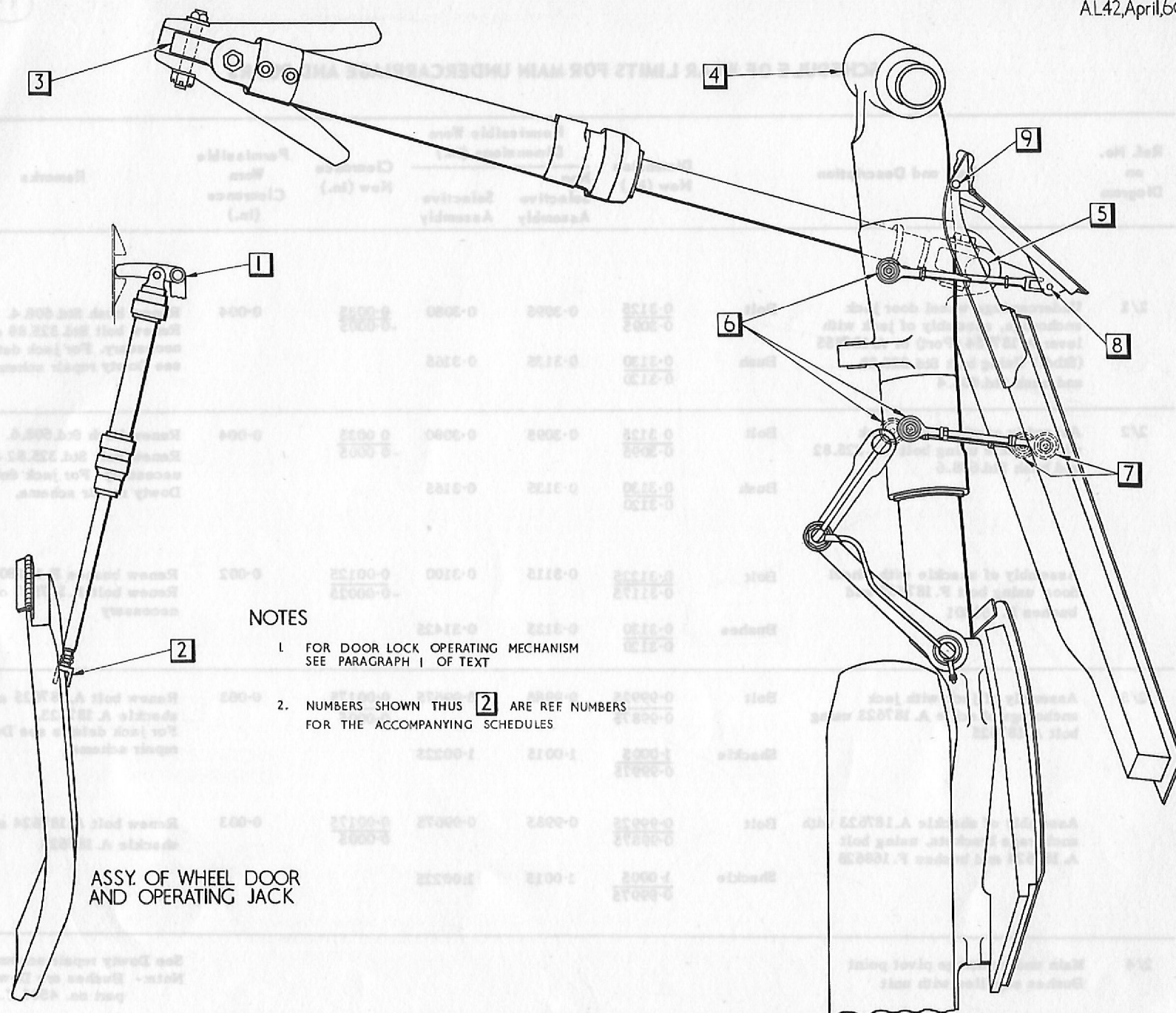


FIG. 1/14

DETAILS FOR NOSE UNDERCARRIAGE AND DOORS

RESTRICTED



NOTES

1. FOR DOOR LOCK OPERATING MECHANISM
SEE PARAGRAPH 1 OF TEXT
2. NUMBERS SHOWN THUS 2 ARE REF NUMBERS
FOR THE ACCOMPANYING SCHEDULES

FIG. 2. BEARING LOCATION DIAGRAM-MAIN UNDERCARRIAGE AND DOORS

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SCHEDULE OF WEAR LIMITS FOR MAIN UNDERCARRIAGE AND DOORS

Ref. No. on Diagram	Part and Description	Dimension New (in.)	Permissible Worn Dimensions (in.)		Clearance New (in.)	Permissible Worn Clearance (in.)	Remarks	
			Non - Selective Assembly	Selective Assembly				
2/1	Undercarriage wheel door jack anchorage, assembly of jack with lever A.187854 (Port) or A.187855 (Stbd.) Using bolt Std.325.88 and bush Std.608.4	Bolt	$\frac{0.3125}{0.3095}$	0.3095	0.3080	$\frac{0.0035}{-0.0005}$	0.004	Renew bush Std.608.4. Renew bolt Std.325.88 only if necessary. For jack details see Dowty repair scheme
		Bush	$\frac{0.3130}{0.3120}$	0.3135	0.3165			
2/2	Assembly of wheel door jack with shackle using bolt Std.325.82 and bush Std.608.6	Bolt	$\frac{0.3125}{0.3095}$	0.3095	0.3080	$\frac{0.0035}{-0.0005}$	0.004	Renew bush Std.608.6. Renew bolt Std.325.82 only if necessary For jack details see Dowty repair scheme.
		Bush	$\frac{0.3130}{0.3120}$	0.3135	0.3165			
	Assembly of shackle with wheel door, using bolt F.187537 and bushes F.151801	Bolt	$\frac{0.31225}{0.31175}$	0.3115	0.3100	$\frac{0.00125}{-0.00025}$	0.002	Renew bushes F.151801 (2 off) Renew bolt F.187537 only if necessary
		Bushes	$\frac{0.3130}{0.3120}$	0.3135	0.31425			
2/3	Assembly of jack with jack anchorage shackle A.187623 using bolt A.187625	Bolt	$\frac{0.99925}{0.99875}$	0.9985	0.99675	$\frac{0.00175}{0.0005}$	0.003	Renew bolt A.187625 and/or shackle A.187623. For jack details see Dowty repair scheme
		Shackle	$\frac{1.0005}{0.99975}$	1.0015	1.00225			
	Assembly of shackle A.187623 with anchorage brackets, using bolt A.187624 and bushes F.168628	Bolt	$\frac{0.99925}{0.99875}$	0.9985	0.99675	$\frac{0.00175}{0.0005}$	0.003	Renew bolt A.187624 and/or shackle A.187623
		Shackle	$\frac{1.0005}{0.99975}$	1.0015	1.00225			
2/4	Main undercarriage pivot point Bushes supplies with unit							See Dowty repair scheme. Note:- Bushes are Dowty part no. 4501.Y. 20

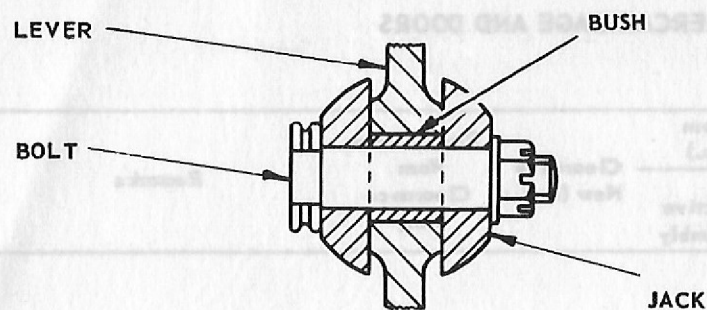


FIG.2/1

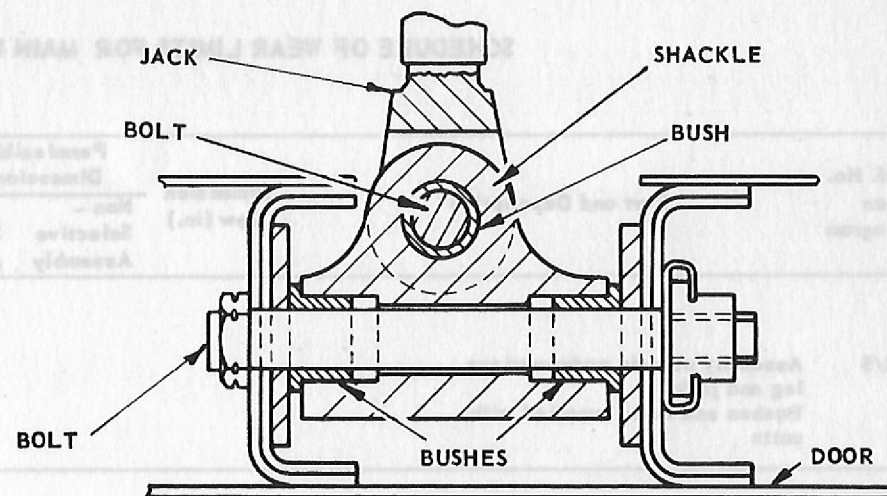


FIG.2/2

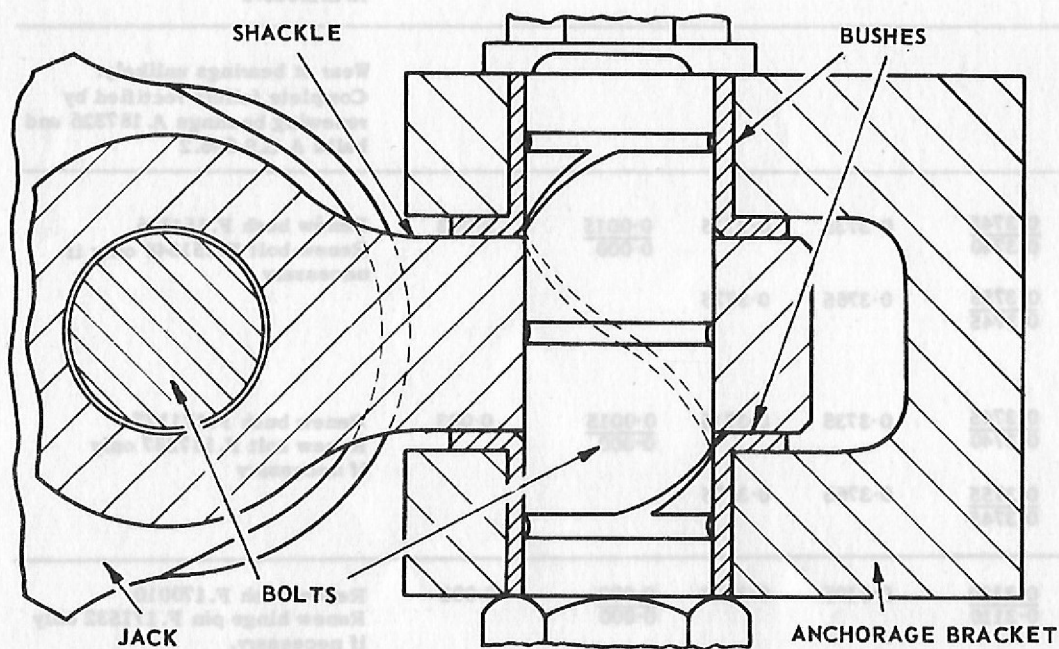


FIG.2/3

DETAILS FOR MAIN UNDERCARRIAGE AND DOORS

SCHEDULE OF WEAR LIMITS FOR MAIN UNDERCARRIAGE AND DOORS

Ref. No. on Diagram	Part and Description	Dimension New (in.)	Permissible Worn Dimensions (in.)		Clearance New (in.)	Permissible Worn Clearance (in.)	Remarks	
			Non - Selective Assembly	Selective Assembly				
2/5	Assembly of main undercarriage leg and jack. Bushes and bolts supplied with units						See Dowty repair scheme	
2/6	Assembly of undercarriage fairing links with undercarriage leg, using rod end bearings A. 18 7325 and balls A. G. S. 636. 2						Wear at bearings unlikely. Complete failure rectified by renewing bearings A. 187325 and balls A. G. S. 636. 2	
2/7	Assembly of undercarriage fairing links with leg fairing. Using rod end bearings A. 187326 and balls A. G. S. 636. 2						Wear at bearings unlikely. Complete failure rectified by renewing bearings A. 187326 and balls A. G. S. 636. 2	
2/8	Assembly of undercarriage fairing link fork end with undercarriage fairing shackle using bolt F. 151348 and bush F. 151346	Bolt	$\frac{0.3745}{0.3740}$	0.3735	0.3715	$\frac{0.0015}{0.000}$	0.003	Renew bush F. 151346. Renew bolt F. 151348 only if necessary
		Bush	$\frac{0.3755}{0.3745}$	0.3765	0.3775			
	Assembly of shackle with fairing using bolt F. 187237 and bushes F. 171177	Bolt	$\frac{0.3745}{0.3740}$	0.3735	0.3715	$\frac{0.0015}{0.000}$	0.003	Renew bush F. 171177. Renew bolt F. 187237 only if necessary
		Bush	$\frac{0.3755}{0.3745}$	0.3765	0.3775			
2/9	Assembly of leg fairing hinge using hinge pin F. 171532 and bush F. 170010	Hinge pin	$\frac{0.3120}{0.3110}$	0.3105	0.3090	$\frac{0.002}{0.000}$	0.003	Renew bush F. 170010. Renew hinge pin F. 171532 only if necessary. Note:- It is advised that both fore and aft hinges are rebushed simultaneously
		Bush	$\frac{0.3130}{0.3120}$	0.3135	0.3150			

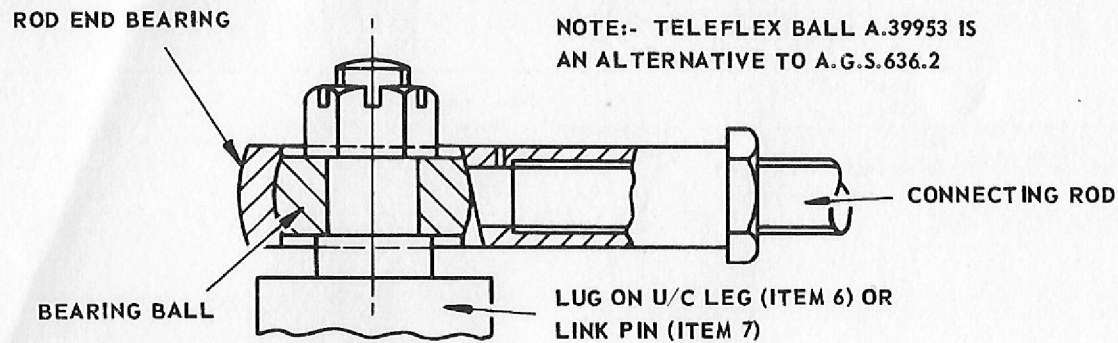


FIG. 2/6 & 2/7

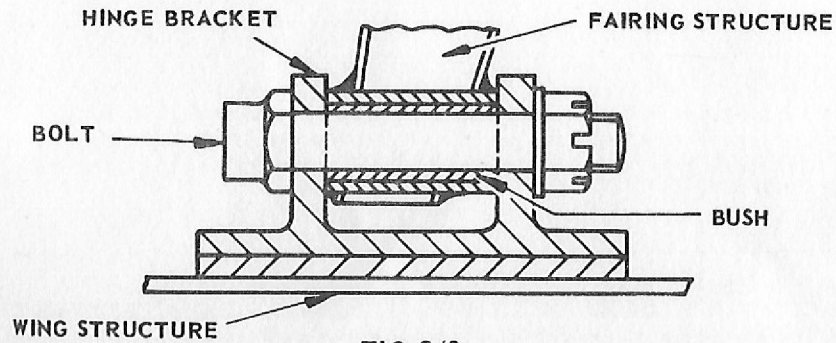


FIG. 2/9

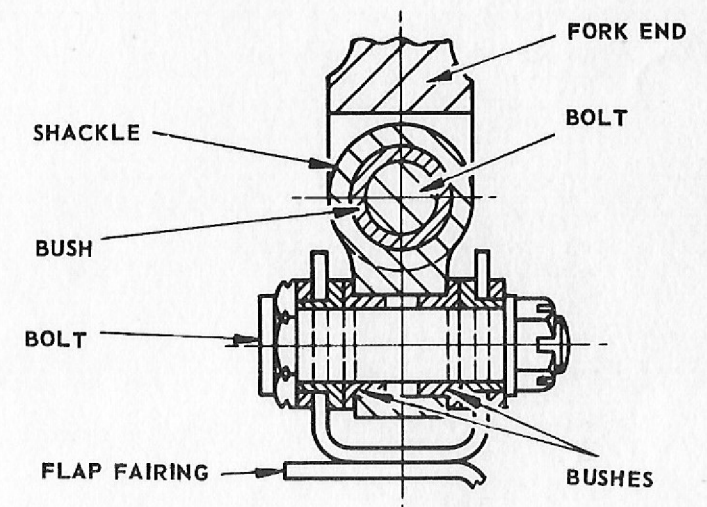


FIG. 2/8

DETAILS FOR MAIN UNDERCARRIAGE AND DOORS

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