CHAPTER 1 GENERAL INFORMATION

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General

1. Volume 6, Part 3 gives the maximum worn clearances at all joints where wear is considered liable to occur and details the rectification action required. Bearing location diagrams showing the location of the joints concerned are provided for easy reference. On each of these bearing location diagrams, the joints in question are indicated by a reference number. These reference numbers are the stroke numbers shown on the schedule accompanying the illustration, the number preceding which is the fig. number of the parent illustration. Wherever possible, enlarged details of these points are given and bear the same number as the relevant item in the schedule.

Systems

2. For hydraulic system components, electrical actuators, etc. reference should be made to the appropriate accessory manual or repair leaflet for details of wear limits.

Ball Bearing Wear Limits

3. The use of ball bearings at hinge points and lever pivots has been widely adopted and the illustrations in the following chapters indicate where they have been fitted, using B.S.S. code symbols wherever possible. Wear at these points is considered unlikely unless caused by excessive vibration, or the ingress of dirt and abrasive particles, despite the provision of protective dust shields wherever possible. Alternatively, the ingress of dirt etc. may cause complete seizure. In either of these cases the joint should be stripped, the bearing thoroughly cleaned and checked for diametric and axial slackness. If beyond the limits given in table 1, the bearing must be renewed. Axial slackness rejection figures only are given for self-aligning bearings since accurate measurement of diametric slackness is extremely difficult; also owing to the slow curvature of the outer ring there is little internal clearance on a new bearing and any slight increase results in an inordinately high increase in axial slackness. Similarly, diametric rejection values only are given for needle roller bearings. Table 2 gives the code numbers used by the various manufacturers and where applicable the appropriate B.S.S. symbol, where alternatives exist for bearings used on this aircraft. All the alternatives listed in Table 2 are freely interchangeable.

Bushes

4. The rectification action recommended in Part 3 frequently involves the renewal of bushes. This usually involves pressing a bush into the appropriate housing and it is therefore necessary to clean out the bush by reaming to the dimension new shown in the appropriate schedule, after the bush has been pressed into position.

TABLE 1 BALL BEARING WEAR LIMITS

TYPE OF BEARING AND B.S.S. CODE SYMBOL (OR MANUFACTURERS SYMBOL IN CASES OF NON B.S.S. BEARINGS)	MAXIMUM AXIAL SLACKNESS (IN.)	MAXIMUM DIAMETRIC SLACKNESS (IN.)
Rigid single row ball journal bearings BRL.5/8; BRE.1/2; BRE.5/8; HOFFMAN C.J.O.	·010	·001
Rigid single row ball journal bearings Torque Tube type BRT.1.1/16; HOFFMAN T.17; HOFFMAN T.21; HOFFMAN T.29	·006	·0006
Rigid single row deep groove journal bearings with side plates BRA.1/4; BRA.3/8; BRA.1/2; BRA.5/8	·007	·0004
Rigid single row duplex ball journal bearings HOFFMAN L.5.CD	·010	·001
Single row angular contact bearings ACL.5/8	·010	·001
Self aligning single row ball journal bearings BAA.1/4; BAA.5/16B	·025	-
Self aligning single row ball journal bearings BAA.3/8	·040	-
Self aligning double row ball journal bearings BAL.020; BAL.025; BAM.1/2	·009	-
Needle roller bearings HOFFMAN NR.12; HOFFMAN NR.15; TORRINGTON B.1012	-	·002

TABLE 2 ALTERNATIVE PART NUMBERS FOR BEARINGS

B.S.S. SYMBOL	MANUFACTURERS CODE NUMBER					U.S. EQUIVALENT
	FISCHER	HOFFMAN	POLLARD	R & M	SKEFCO	
Rigid single row ball journal bearings						
BRL 5/8	LS 7	LS 7	LS 7	LJ 5/8	RLS 5	-
BRE 1/2	EE 4	S 5	SC 5	KLNJ 1/2	EE 4	155-8428
BRE 5/8	EE 5	S 7	SC 7	KLNJ 5/8	EE 5	-
-	T 17	T 17	-	CA 1.1/16	TTS 8.1/2	142-4330
-	T 21	T 21	-	CA 1.5/16	TTS 10.1/2	142-4332
-	T 29	T 29	-	CA 1.13/16	TTS 14.1/2	142-4337
BRA 1/4	-	CS 1	-	CK 1/4 A	CBS 2	-
BRA 3/8	-	CS 3	-	CK 3/8 A	CBS 3	-
BRA 1/2	-	CS 5	-	CK 1/2 A	CBS 4	-
BRA 5/8	-	CS 7	-	CK 5/8	CBS 5	-
Single row angular contact bearings						
ACL 5/8	ACL 7	LS 7 ACD	-	LJT 5/8	ALS 5A	-
Self-aligning single row ball journal bearings						
BAA 1/4	-	CA 1	-	CD 1/4	CBA 2	142-4314
BAA 5/16 B	-	N 3113	-	CD 5/16 B	1.132499	-
BAA 3/8	-	CA 3	-	CD 3/8	CBA 3	142-4317
Self-aligning double row ball journal bearings						
BAL 020	P 204	U 120	-	NLJ 20	1204	156-5055
BAL 025	P 205	U 125	P 205	NLJ 25	1205	156-5060