

## Chapter 5

### REPAIR OF DUNLOP NOSE AND TAIL WHEELS

1. This chapter contains information to guide personnel in the repair of certain wheels that have been made unserviceable through wear and damage.

2. Each wheel repair is given the code letters "RP" followed by the repair number. The repairable wheels are tabulated in the List of Wheels and Relevant Repair Schemes, and the "RP" and relevant chapter appendix numbers are given in the adjoining columns. Details of special tools and spare parts which are fundamentally similar, are given in Tables that follow the List of Wheels and Relevant Repair Schemes.

3. The repairs generally are confined to wheels in which the housings for the bearings

have become so enlarged that the outer tracks of the bearings creep. To remedy this, a repair scheme, if practicable, is compiled to give instructions for enlarging the bearing housings and fitting steel liners. After being fitted, the liners are machined to the dimensions of the original housings to accommodate new bearings. Note that, where no tolerances are given for certain dimensions on the repair drawings, the following limits will apply:  $\pm 0.005$  in. for decimal dimensions, and  $\pm 0.015$  in. for fractional dimensions.

4. The recommended methods to be used to set up and machine a wheel in a lathe are given in Chapter 1, Appendix 1.

(A.L.42, Apr. 56)

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## LIST OF WHEELS AND RELEVANT REPAIR SCHEMES

| Wheel Part No. | Issue No. | Vol. 1 Ref. Sect. 1, Chap. 5 Appendix | Repair scheme Part No. | Wheel Part No. | Issue No. | Vol. 1, Ref. Sect. 1, Chap. 5 Appendix | Repair scheme Part No. |
|----------------|-----------|---------------------------------------|------------------------|----------------|-----------|--|------------------------|
| AHO.18551      |           | 1                                     |                        | AH.8199        |           | 38                                     |                        |
| AHO.19811      |           | 2                                     |                        | AH.8278        |           | 39                                     |                        |
| AH.8431        |           | 3                                     |                        | AH.8956/1      |           | 40                                     |                        |
| AH.2184        |           | 4                                     |                        | AH.8957/2      |           | 40                                     |                        |
| AH.207         |           | 5                                     |                        | AHO.5047       |           | 41                                     |                        |
| AHO.5031       |           | 6                                     |                        | AH.8415        |           | 42                                     |                        |
| AHO.5489       |           | 7                                     |                        | AH.8055        |           | 43                                     |                        |
| AH.8944        |           | 8                                     |                        | AH.9238        |           | 44                                     |                        |
| AHO.20233      |           | 9                                     |                        | AH.8466        |           | 45                                     |                        |
| AH.8432        |           | 10                                    |                        | AH.10022       |           | 46                                     |                        |
| AH.8509        |           | 11                                    |                        | AH.8451        |           | 47                                     |                        |
| AH.8221        |           | 12                                    |                        | AH.8450        |           | 48                                     |                        |
| AH.8945        |           | 13                                    |                        | AHO.17930      |           | 49                                     |                        |
| AH.8299        |           | 14                                    |                        | AH.8378        |           | 50                                     |                        |
| AH.8267        |           | 15                                    | 112                    | AH.8373        |           | 51                                     |                        |
| AH.8403        |           | 16                                    |                        | AH.8924        |           | 52                                     |                        |
| AH.17640       |           | 17                                    |                        | AH.9378        |           | 53                                     |                        |
| AH.8291        |           | 18                                    |                        | AH.9408        |           | 54                                     |                        |
| AH.8369        |           | 19                                    |                        | AH.9593        |           | 55                                     |                        |
| AH.2038        |           | 20                                    |                        | AH.9668        |           | 56                                     |                        |
| AHO.5560       |           | 21                                    |                        | AHO.27928      |           | 57                                     |                        |
| AH.10191       |           | 22                                    |                        | AH.9336        |           | 58                                     | 78                     |
| AH.8023        |           | 23                                    |                        | AH.9590        |           | 59                                     |                        |
| AHO.5007       |           | 24                                    |                        | AH.9828        |           | 60                                     | 673                    |
| AHO.16574      |           | 25                                    |                        | AH.9861        |           | 61                                     |                        |
| AHO.17219      |           | 26                                    |                        | AH.8864        |           | 62                                     |                        |
| AH.8244        |           | 27                                    |                        | AH.9412        |           | 63                                     |                        |
| AH.8060        |           | 28                                    |                        | AH.50161       |           | 64                                     |                        |
| AH.8013        | Code V    | 29                                    |                        | AH.50193       |           | 65                                     | 673                    |
| AH.8013        | Code K    | 30                                    |                        | AH.9697        |           | 66                                     |                        |
| AH.2282        |           | 31                                    |                        | AH.9613        |           | 67                                     |                        |
| AH.10223       |           | 32                                    |                        | AH.9947        |           | 68                                     |                        |
| AHO.17500      |           | 33                                    |                        | AH.9128        |           | 69                                     |                        |
| AHO.5048       | Code F    | 34                                    |                        | AH.50197       |           | 70                                     |                        |
| AHO.5048       | Code K    | 35                                    |                        | AH.9912        |           | 71                                     |                        |
| AHO.5779       |           | 36                                    |                        | AH.9527        |           | 72                                     |                        |
| AH.8465        |           | 37                                    |                        |                |           |  |                        |

(continued overleaf)

Note . . .

Details of tools and repair parts which are fundamentally similar are given in Tables following this list.

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# LIST OF WHEELS AND RELEVANT REPAIR SCHEMES (cont.)

| Wheel<br>Part No. | Issue<br>No. | Vol. 1 Ref.<br>Sect. 1, Chap. 5<br>Appendix | Repair scheme<br>Part No. | Wheel<br>Part No. | Issue<br>No. | Vol. 1 Ref.<br>Sect. 1, Chap. 5<br>Appendix | Repair scheme<br>Part No. |
|-------------------|--------------|---|---------------------------|-------------------|--------------|---|---------------------------|
| AH.50313          |              | 73  |                           |                   |              |   |                           |
| AH.50575          |              | 74  | 169                       |                   |              |   |                           |
| AH.50022          |              | 75  |                           |                   |              |   |                           |
| AH.50089          |              | 76  |                           |                   |              |   |                           |
| AH.9680           |              | 77  |                           |                   |              |   |                           |
| AH.50848          |              | 78  |                           |                   |              |   |                           |
| AH.50525          |              | 79  |                           |                   |              |   |                           |
| AH.50930          |              | 80  |                           |                   |              |   |                           |
| AH.8924           |              | 52  | 210                       |                   |              |   |                           |
| AH.51045          |              | 84  | 603                       |                   |              |   |                           |

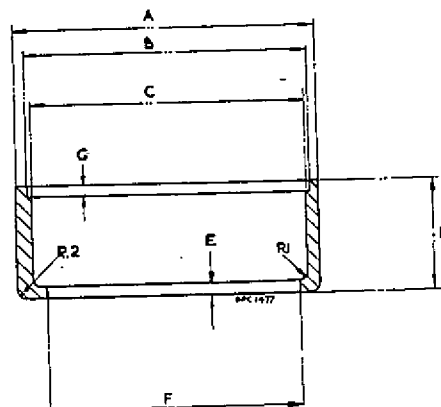
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TABLE I  
Details of liners for wheel bearing housings  
(dimensions in inches)

| Part No. | Material spec.                          | A (dia.)                      | B (dia.)              | C (dia.)              | D                     | E                     | F                     | G                     | R.1 (rad.)            | R.2 (rad.)            | Treatment     |
|----------|---|-------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------|
| RP78/2   | S94, S95,<br>or S96                     | $\frac{2.804}{2.803}$         | $\frac{2.699}{2.694}$ | $\frac{2.610}{2.600}$ | $\frac{0.703}{0.700}$ | $\frac{0.130}{0.120}$ | $\frac{2.317}{2.307}$ | $\frac{0.130}{0.120}$ | $\frac{0.074}{0.045}$ | $\frac{0.105}{0.075}$ | Cadmium plate |
| RP112/2  | Mild steel<br>(Good commercial quality) | $\frac{2.815}{2.814}$         | $\frac{2.699}{2.694}$ | $\frac{2.630}{2.620}$ | $\frac{0.680}{0.678}$ | $\frac{0.105}{0.097}$ | $\frac{2.317}{2.307}$ | $\frac{0.130}{0.120}$ | $\frac{0.075}{0.060}$ | $\frac{0.080}{0.070}$ | Cadmium plate |
|          |   | 2.816<br>(Max. after plating) |                       |                       |                       |                       |                       |                       |                       |                       |               |

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CADMIUM PLATE TO  
SPECIFICATION D.T.D. 904

(AL54, Feb. 57)

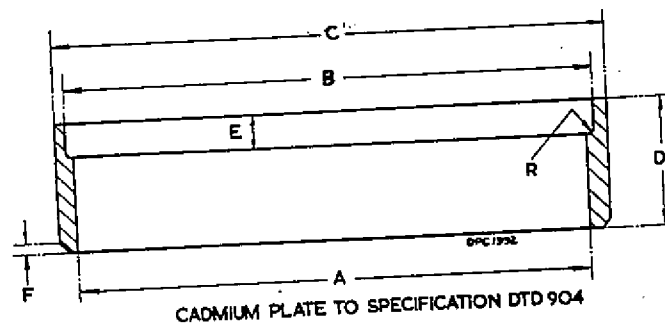
A.P.2337, Vol. 6, Sect. 1, Chap. 5 (AL54)

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TABLE 2

Details of liners for wheel bearing housings

| Part No. | Material spec.                       | A<br>(dia.)           | B<br>(dia.)           | C<br>(dia.)           | D                     | E                     | F                                      | R<br>(rad.)           | Treatment     |
|----------|--------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|-----------------------|---------------|
| RP.169/2 | Mild steel (Good commercial quality) | $\frac{2.422}{2.442}$ | $\frac{2.520}{2.510}$ | $\frac{2.623}{2.622}$ | $\frac{0.598}{0.588}$ | $\frac{0.160}{0.150}$ | $\frac{0.035}{0.025}$ × 45 deg. chamf. | $\frac{0.035}{0.025}$ | Cadmium plate |



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(A.L.58, July 57)

A.P.2337, Vol. 6, Sect. 1, Chap. 5 (A.L.58)

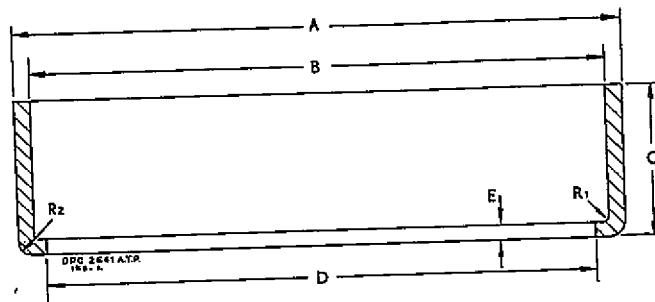
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(A.L.71, Sep, 58)

**TABLE 3**  
**Details of liners for wheel bearing housings**  
 (dimensions in inches)

| Part No. | Material Spec. | A<br>(dia.) | B<br>(dia.) | C     | D<br>(dia.) | E     | R1<br>(rad.) | R2<br>(rad.) | Treatment |
|----------|----------------|-------------|-------------|-------|-------------|-------|--------------|--------------|-----------|
| RP.210/2 | Dural<br>L.64  | 2.778       | 2.650       | 0.670 | 2.317       | 0.105 | 0.045        | 0.075        | Anodise   |
|          |                | 2.777       | 2.640       | 0.660 | 2.307       | 0.095 | 0.030        | 0.060        |           |



A.P.2337, Vol. 6, Sect. 1, Chap. 5 (A.L.71)

## RP 78

## REPAIR TO HOUSINGS FOR WHEEL BEARINGS

## Requirements

*Lathe*—Herbert No. 9 combination or its equivalent. The surface cutting speeds for turning operations must be approximately 200 ft. per min. for the Elektron hub and 50 ft. per min. for the steel liners.

*Press tools*—

|                   |                    |
|-------------------|--------------------|
| Pressing in tool, | Part No. AO.61726  |
| Mandrel and base  | Part No. AO.36882  |
| Collar            | Part No. AO.101004 |

*New Parts*—Liners, Part No. RP78/2. The liners (Table 1) to be provided under unit arrangements.

*Selenious acid solution*—2 oz. selenious acid crystals dissolved in one pint of water.

## WARNING

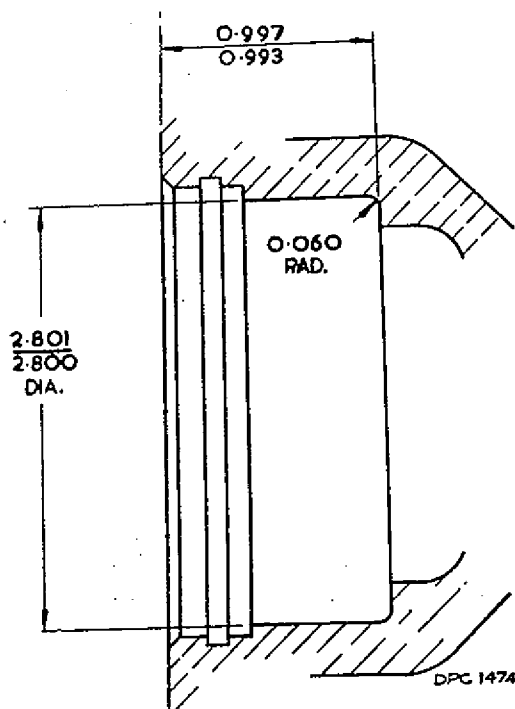
*Selenious acid crystals or solution must not be allowed to come into contact with the skin.*

## Introduction

1. Due to various causes the housings for the wheel bearings may become enlarged to such an extent that the outer track of one or both bearings is loose in the housing. When this condition arises, the affected housing(s) must be enlarged and steel liner(s) fitted to restore the housing(s) to its (their) original dimensions. Bearing creep in the housing is permissible provided the bearings are not loose in the housing.

## Method of repair

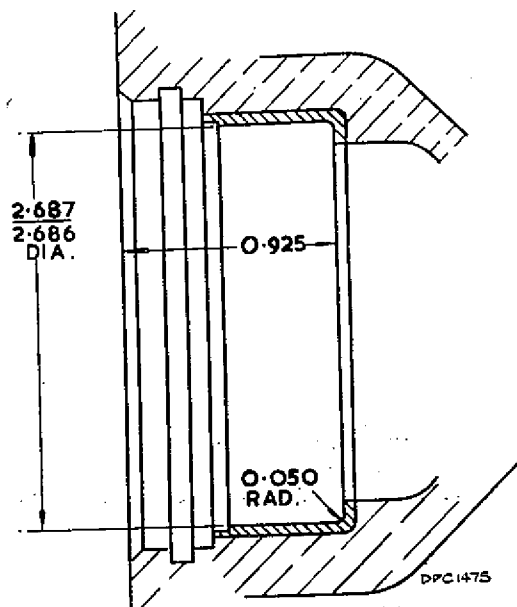
2. (1) Dismantle and degrease the wheel.
- (2) Remove the paint as described in Vol. 1, Sect. 1, Chap. 1.



DIMENSIONS IN INCHES

RP 78/1

Fig. 1. Machining of bearing housings



DIMENSIONS IN INCHES

RP 78/3

Fig. 2. Machining of fitted liners

(A.L.42, Apr. 56)

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- (3) Mount the wheel half hub in a lathe so that the chuck locates on the tyre seat. Set up the wheel so that it runs true in both the vertical and horizontal planes. To check for truth, apply a dial test indicator to the hub of the bearing housing; the maximum permitted D.T.I. variation is 0.002 in.
- (4) Machine the bearing housing to the dimensions given in RP78/1 (*fig. 1*).
- (5) Clean the machined surfaces and repair the chromate film (*A.P.2656A, Vol. 1, Sect. 5, Chap. 2*).
- (6) Heat the hub to a temperature of 100 deg.C by immersing it in boiling water. While the hub retains its heat, quickly dry it, and coat the exterior surfaces of the liners with a thin coating of pigmented varnish jointing compound (*Stores Ref. 33C/1264*).
- (7) Position the mandrel and base on the press, place the half hub over the mandrel and locate the liner RP78/2 on the hub bore.
- (8) Engage the liner with the pressing in tool then position the collar over the mandrel.

(9) Press the liner into the hub bore. There must be no gap between the inner end of the liner and the abutment face of the housing; check this using a 0.0015 in. feeler gauge.

- (10) Position the wheel in the lathe and set up as in (3). Machine the liners to the dimensions given in RP78/3. The finished bore must be smooth and free from tool marks. Check against drawing dimensions.

#### Inspection

3. The repair must be to the satisfaction of the supervising inspector A.I.D., C.I.O./N.A.I. or C.I.O./A.I.S.

#### Painting

4. Repaint the hub as described in Vol. 1, Sect. 1, Chap. 1.

#### Identification

5. After satisfactory completion of the repair use  $\frac{1}{8}$  in. metal stamps to mark "RP 78" below the assembly issue number on the wheel. After marking the wheel, paint the indentations with selenious acid solution.

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## RP112

## REPAIR TO HOUSINGS FOR WHEEL BEARINGS

## Requirements

*Lathe.*—Herbert No. 9 combination or its equivalent. The surface cutting speeds for turning operations must be approximately 200 ft. per min. for the Elektron hub and 50 ft. per min. for the steel liners.

## Press tools:—

|                    |                   |
|--------------------|-------------------|
| Pressing in sleeve | Part No. AO.67960 |
| Mandrel and base   | Part No. AO.42700 |
| Collar             | Part No. AO.50393 |

*New parts:*—Liners, Part No. RP112/2. The liners (Table 1) to be provided under unit arrangements.

*Selenious acid solution:*—2 oz. selenious acid crystals dissolved in one pint of water.

**WARNING**

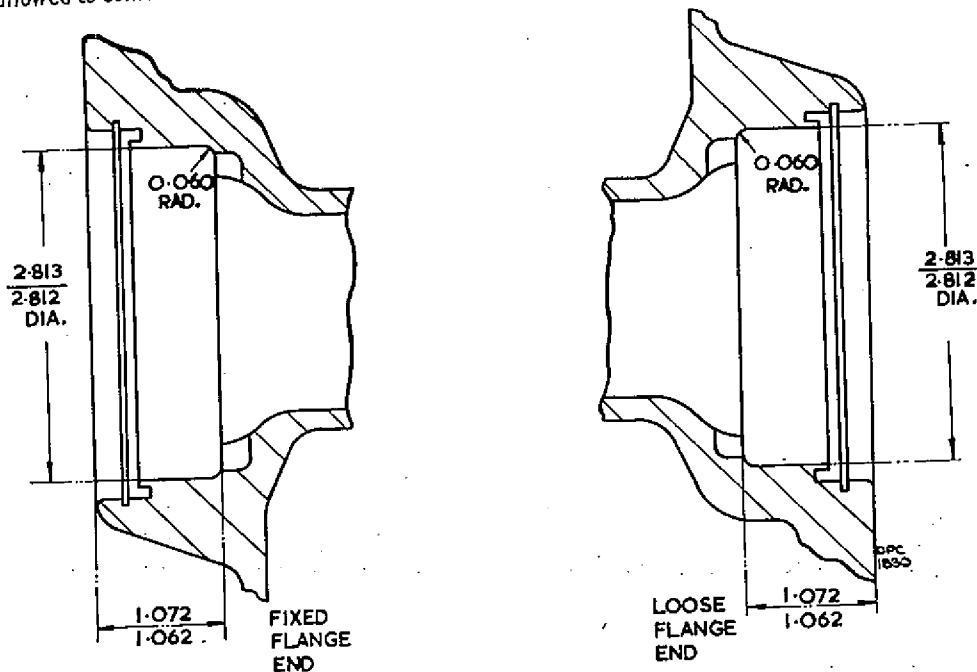
Selenious acid crystals or solution must not be allowed to come into contact with the skin.

## Introduction

1. Due to various causes, the housings for the wheel bearings may become enlarged to such an extent that the outer track of one or both bearings is loose in the housing. When this condition arises, the affected housing(s) must be enlarged and steel liners fitted to restore the housing(s) to its (their) original dimensions. Bearing creep in the housing is permissible provided the bearings are not loose in the housing.

## Method of repair

2. (1) Dismantle and degrease the wheel.
- (2) Remove the paint as described in Vol. 1, Book 1, Sect. 1, Chap. 1.
- (3) Mount the wheel hub in a lathe so that the chuck locates on the tyre seat at the loose flange end. Set up the wheel so that it runs true in both the vertical and horizontal planes. To check for



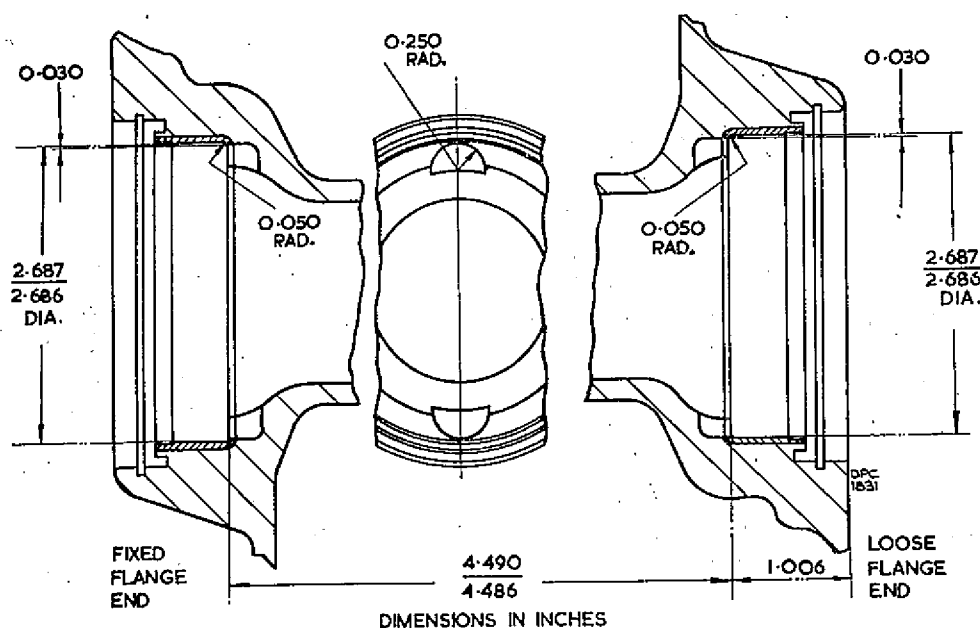
DIMENSIONS IN INCHES

RP 112/1

Fig. 1. Machining of bearing housing

(A.L.54, Feb. 57)

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### RP 112/3

Fig. 2. Machining of fitted liners

- (4) Reverse the wheel hub in the lathe and adjust the chuck jaws to grip lightly the flange dia. at the fixed flange end of the wheel, and locate the previously machined 2.812/2.813 in. dia. with spigot Part No. AM.17605. Set up as described in (3) and machine the bearing housing at the loose flange end to the dimensions given in RP112/1. Check the bore dia. with a standard drill bore gauge and the depth with depth gauge, Part No. AO.67959.
- (5) Clean the machined surfaces and repair the chromate film (A.P.2656A, Vol. 1, Sect. 5, Chap. 2).
- (6) Heat the hub to a temperature of 100 deg. C by immersing it in boiling water. While the hub retains its heat quickly dry it and apply a thin coating of pigmented varnish jointing compound (Stores Ref. 33C/1264) to the machined surfaces of the bearing housings.
- (7) Position the mandrel and base on the press, place the wheel over the mandrel and locate the liner RP112/2 on the hub bore at the loose flange end.
- (8) Engage the liner with the pressing in sleeve then position the collar over the mandrel.
- (9) Press the liner into the hub bore. There must be no gap between the inner end of the liner and the abutment face of the housing; check this using a 0.0015 in. feeler gauge.
- (10) Reverse the wheel on the press and press the liner RP112/2 into the hub bore at the fixed flange end as detailed in sub-para. (7), (8), and (9).
- (11) Position the wheel hub in the lathe and adjust the jaws to grip lightly the flange dia. at the fixed flange end of the wheel. Set up the wheel as described in (3), and machine the liner to the dimensions given in RP112/3. The finished bore must be smooth and free from tool marks. Check the bore dia. with a standard dial bore gauge and the depth with depth gauge, Part No. AO.24312 or AO.25117.

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- (12) Reverse the wheel hub in the lathe and adjust the chuck jaws to locate on the tyre seat dia. at the loose flange end of the wheel. Locate the previously machined 2-686/2-687 in. bore with spigot Part No. AM.17606. Set up the wheel hub as described in (3), and machine the liner to the dimensions given in RP112/3. Check the bore dia. with a standard dial bore gauge and the gap with gap gauge Part No. AO.24914.
- (13) Set the wheel up on the table of a vertical miller and using drill jig, Part No. AM.9262 and end cutting reamer, Part No. AO.32940 drill two extractor slots in a position away from the existing extractor slots in the hub as detailed in RP112/3.
- (14) Repeat operation (13) at the other end of the wheel.

- (15) Carefully remove all burrs from the extractor slots and check that the slots conform to drawing requirements. Paint the freshly machined surfaces of the hub with selenious acid solution.

#### Inspection

3. The repair must be to the satisfaction of the supervising inspector A.I.D., C.I.O./N.A.I. or C.I.O./A.I.S.

#### Painting

4. Repaint the hub as described in Vol. 1, Sect. 1, Chap. 1.

#### Identification

5. After satisfactory completion of the repair, use  $\frac{1}{8}$  in. metal stamps to mark "RP112" below the assembly Issue No. on the wheel. After marking the wheel, paint the indentations with selenious acid solution.

## RP.169

### REPAIR TO HOUSINGS FOR WHEEL BEARINGS

#### Requirements

*Lathe*:—Herbert No. 9B or its equivalent

#### Press tools:—

Pressing in sleeve Part No. AO.102854  
Mandrel and base Part No. AO.102081  
Collar Part No. AO.42807

*New Parts*:—Liners, Part No. RP.169/2.  
The liner (Table 1) to be provided under unit requirements.

*Selenious acid solution*:—2 oz. selenious acid crystals dissolved in one pint of water.

#### WARNING

Selenious acid crystals must not be allowed to come into contact with the skin.

#### Introduction

1. Due to various causes, the housings for the wheel bearings may become enlarged to such an extent that the outer track of one or both bearings is loose in the bearing housing. Bearing creep in the housing is permissible provided the bearings are not loose in the housing. When this condition arises the affected housing(s) must be enlarged and steel liner(s) fitted to restore the housing(s) to its (their) original dimensions.

#### Method of repair

2. (1) Dismantle and degrease the wheel.
- (2) Remove the paint as described in Vol. 1, Sect. 1, Chap. 1.
- (3) Mount the half hub, Part No. AH.40738 in a lathe so that the chuck locates on the tyre seat diameter. Set up the half hub so that it runs true in both the vertical and horizontal planes; to check for truth apply a dial test indicator to the half hub, the maximum permitted D.T.I. variation is 0.002 in.
- (4) Machine the half hub at the flanged end to the dimensions given in RP.169/1. Check the bore dia. with a plug gauge, Part No. AO.72996 and the depth with a gap gauge, Part No. AO.72997.
- (5) Mount the half hub, Part No. AH.40739 in the lathe as detailed in (3).
- (6) Machine the half hub at the flanged end to the dimensions given in RP.169/1. Check the bore dia. with a plug gauge, Part No. AO.72996 and

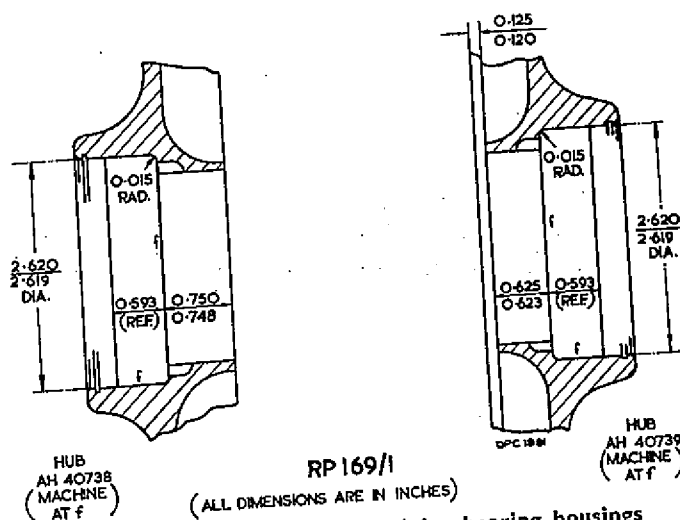


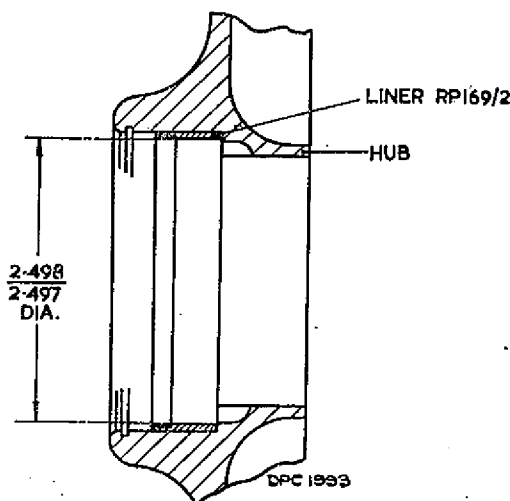
Fig. 1. Dimensions for machining bearing housings

(A.L.58, July 57)

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the depth with a gap gauge, Part No. AO.32735.

- (7) Clean the machined surfaces of both half hubs and repair the chromate film (A.P.2656A, Vol. 1, Sect. 5, Chap. 2).



### RP 169/3

(ALL DIMENSIONS ARE IN INCHES)

Fig. 2. Dimensions for machining fitted liners

- (8) Heat the half hubs to a temperature of 100 deg. C by immersing them in boiling water. While the hubs retain their heat, apply a thin coating of pigmented varnish jointing compound (Stores Ref, 33C/1264) to the machined surfaces of the bearing housings.

- (9) Position the mandrel and base on the press, place the half hub over the mandrel and locate the liner RP.169/2 on the hub bore.
- (10) Engage the liner with the pressing in sleeve then position the collar over the mandrel.
- (11) Press the liner into the hub bore. There must be no gap between the inner end of the liner and the abutment face of the housing; check this using a 0-0015 in. feeler gauge.
- (12) Repeat operation (11) with the other half hub.
- (13) Allow the half hubs to cool and then set up half hub, Part No. AH.40738 in a lathe as detailed in sub-para. (3) and machine the liner to the dimensions given in RP.169/3. Check the bore dia. with a plug gauge, Part No. AO.72998. The bore must be perfectly smooth and free from tool marks.
- (14) Repeat operation (13) with hub, Part No. AH.40739.

#### Inspection

3. The repair must be to the satisfaction of the supervising inspector A.I.D., C.I.O./N.A.I. or C.J.O./A.I.S.

#### Painting

4. Repaint the hubs as described in Vol. 1, Sect. 1, Chap. 1.

#### Identification

5. After satisfactory completion of the repair "RP.169" is to be stamped immediately below the Assembly Issue Number on the face of the wheel with  $\frac{1}{8}$  in. metal stamps.

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## RP.210 REPAIR TO HOUSINGS FOR WHEEL BEARINGS

### Requirements

**Lathe:**—No. 9 Combination or its equivalent.

**Press tools:**—

Pressing in sleeve

Mandrel and base Part No. AO.102081

Collar Part No. AO.42807

**New Parts:**—Liners, Part No. RP.210/2

The liner (Table 3) to be provided under unit requirements.

**Selenious acid solution:**—2 oz. selenious acid crystals dissolved in one pint of water.

### WARNING

Selenious acid crystals must not be allowed to come into contact with the skin.

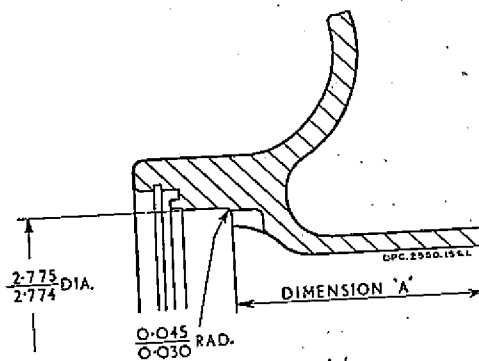
### Introduction

1. Due to various causes the housings for the wheel bearings may become enlarged to such an extent that the outer track of one or both bearings is loose in the bearing housing. Bearing creep in the housing is permissible provided the bearings are not loose in the housing. When this condition arises the affected housing(s) must be enlarged and dural liner(s) fitted to restore the housing(s) to its (their) original dimensions.

### Method of Repair

2. (1) Dismantle and degrease the wheel.
- (2) Remove the paint described in Vol. 1, Sect. 1, Chap. 1.
- (3) Mount the half hub, Part No. AH. 7556 in a lathe so that the chuck locates on the tyre seat diameter. Set up the

half hub so that it runs true in both the vertical and horizontal planes; to check for truth apply a dial test indicator to the



| DIMENSION 'A' |                |
|---------------|----------------|
| HALF HUB      | AH. 7556       |
|               | 2.503<br>2.500 |
| HALF HUB      | AH. 7557       |
|               | 2.385<br>2.382 |

RP 210/1  
(DIMENSIONS IN INCHES)

half hub, the maximum permitted D.T.I. variation is 0.002 in.

- (4) Machine the half hub to the dimensions given in RP.210/1. Check the bore dia. with a plug gauge and the depth with a gap gauge.
- (5) Mount the half hub, Part No. AH. 7557 in a lathe as detailed in sub-para. (3).
- (6) Machine the half hub to the dimensions given in R.P.210/1. Check the bore dia. with a plug gauge and the depth with a depth gauge.
- (7) Clean the machined surface of both half hubs and repair the chromate film (A.P.2656A, Vol. 1, Sect. 5, Chap. 2).
- (8) Heat the half hubs to a temperature of 100 deg. C either by immersing them

in boiling water or placing them in a muffle furnace. Coat the contacting surface of the liners with a thin layer of pigmented varnish jointing compound (Ref. No. 33C/1264).

(9) Position the mandrel and base on the press, place the half hub over the mandrel and locate the liner RP.210/2 on the hub bore.

(10) Engage the liner with the pressing in sleeve then position the collar over the mandrel.

(11) Press the liner into the hub bore. There must be no gap between the inner end of the liner and the abutment face of the housing; check this using a 0.0015 in. feeler gauge.

(12) Repeat operations (9), (10) and (11) with the other half hub.

(13) Allow the half hubs to cool then set up half hub, Part No. AH.7556 in a lathe as detailed in sub-para. (3) and machine the liner to the dimensions given in RP.210/3. Check the bore dia. with a plug gauge and the depth with a gap

gauge. The bore must be perfectly smooth and free from tool marks.

(14) Repeat operation (13) with the other half hub, Part. No. AH.7557.

(15) Drill two slots in the liner to line up with the existing bearing removal slots.

(16) Protect the machined portion of the liner with seaplane varnish (Ref. No. 33B/107 or 556).

### Inspection

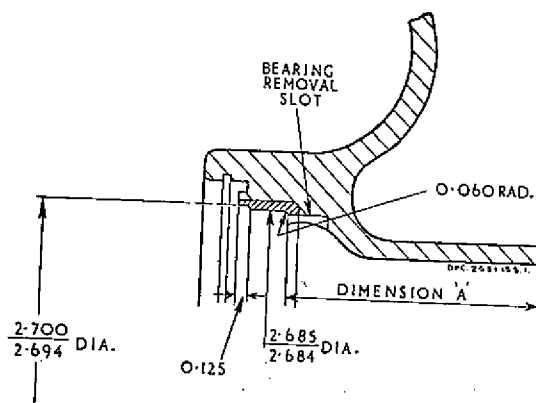
3. The repair must be to the satisfaction of the supervising A.I.D., C.I.O./N.A.I. or C.I.O./A.I.S.

### Identification

4. After satisfactory completion of the repair "RP.210" is to be stamped immediately below the Assembly Issue Number on the face of the wheel with  $\frac{1}{8}$  in. metal stamps. Paint the indentations with selenious acid solution.

### Painting

5. Repaint the hubs as described in Vol. 1, Sect. 1, Chap. 1.



| DIMENSION A |         |                |
|-------------|---------|----------------|
| HALF HUB    | AH.7556 | 2.560<br>2.557 |
| HALF HUB    | AH.7557 | 2.435<br>2.432 |

RP 210/3  
(DIMENSIONS IN INCHES)

**RESTRICTED**

## RP.603

REMOVAL OF EXCESSIVE CORROSION  
NOSE WHEEL AH.51045

(Half-hubs AH.41296 and AH.41297)

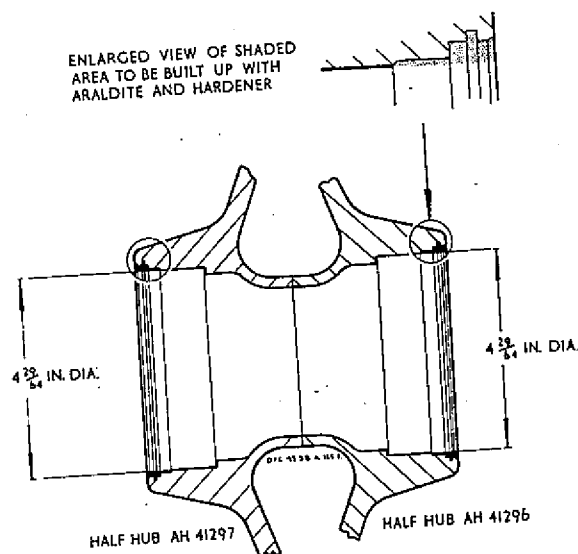


Fig. 1

## Scheme

1. To remove excessive corrosion adjacent to the circlip groove and to build up with Araldite and Hardener to the original dimensions. Corrosion pitting is allowed up to a maximum depth of 0.1 in. around the whole circumference of the  $4\frac{453}{64}$  in. dia: (fig. 2). A wheel with pitting in excess of this cannot be repaired.

## Requirements

2. Selenious acid solution: make from 2 oz. selenious acid crystals dissolved in one pint of water.

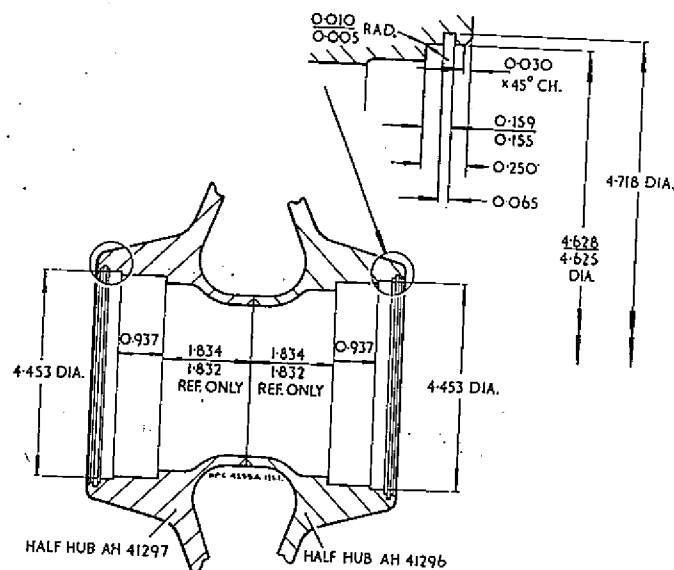
Araldite AV.121 and Hardener HY.951.

## Method of repair

3. (1) Dismantle the wheel as detailed in Vol. 1, Book 1, Sect. 1, Chap. 1.
- (2) Degrease and clean the wheel.
- (3) Grit blast to remove the corrosion. Take care not to damage the circlip groove or bearing bore. Measure the depth of corrosion pitting. This must not exceed 0.1 in.
- (4) Protect the bare metal with selenious acid solution.
- (5) Build up the corrosion-pitted areas (fig. 1) with Araldite AV.121 and Hardener HY.951 (refer to App. 3, for details of using the mixture for Process No. 1).

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ALL DIMENSIONS IN INCHES

Fig. 2

- (6) Machine the half-hubs to the original dimensions given in fig. 2.
- (7) Protect any bare metal with selenious acid solution. If facilities for re-chromating are available re-chromate the wheel to DTD.911.
4. The repair must be to the satisfaction of the supervisory Inspecting Authority.
5. After satisfactory completion of the repair, impress RP.603 on the face of each repaired half-hub adjacent to the half-hub part number, with  $\frac{1}{8}$  in. metal stamps. Paint the indentations with selenious acid solution. If the hub is to be re-chromated stamp RP.603 before re-chromating.
6. If necessary, re-paint the half-hub in accordance with Vol. 1, Book 1, Sect. 1, Chap. 1. Assemble the wheel as detailed in Vol. 1, Book 1, Sect. 1, Chap. 5, and App. 84.

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# RP.673

## REPAIR TO BUSH IN HUB NOSE WHEELS AH.9828, AH.50193 (Hub, Part No. AH.40419, AH.40178)

1. This repair scheme is to renew a bush which has become loose in the hub. One or both sides of the hub may be repaired as required. If a hub cannot be repaired by the 1st stage of this repair then it may be possible to repair it in accordance with the 2nd stage.

2. The following new parts are required:—

| Part No.    | Description      | No. off |
|-------------|------------------|---------|
| AHO.83736/1 | Bush (1st stage) | 1 or 2  |
| AHO.83736/2 | Bush (2nd stage) | 1 or 2  |

3. Other requirements are a solution made from 2 oz. selenious acid crystals dissolved in one pint of water. Araldite D.T.D. 900/4365 and Hardener D.T.D.900/4440.

### Method of repair

4. (1) Dismantle the wheel as detailed in

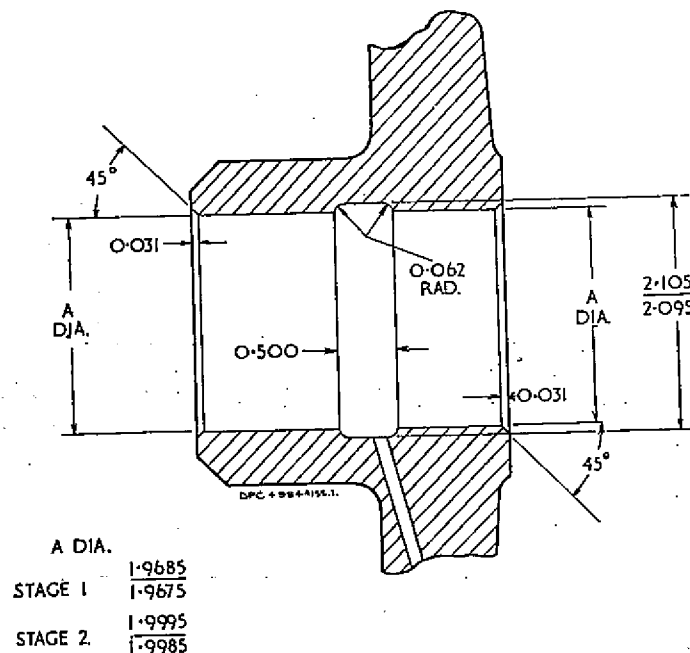
A.P.2337, Vol. 1, Book 1, Section 1, Chap. 5.

(2) Press out the faulty bush.

(3) If necessary, remove the paint then degrease the wheel.

(4) Set up the hub in a lathe. The hub must run true in both the vertical and horizontal planes. To check it, apply a dial test indicator to the hub bore. The maximum d.t.i. variation permitted is 0.002 in.

(5) Machine one or both ends of the hub bore to the details given in fig. 1. If a bore cannot be machined to the 1st stage it must be machined to the 2nd stage. Ensure that the grease channel is kept free from swarf.

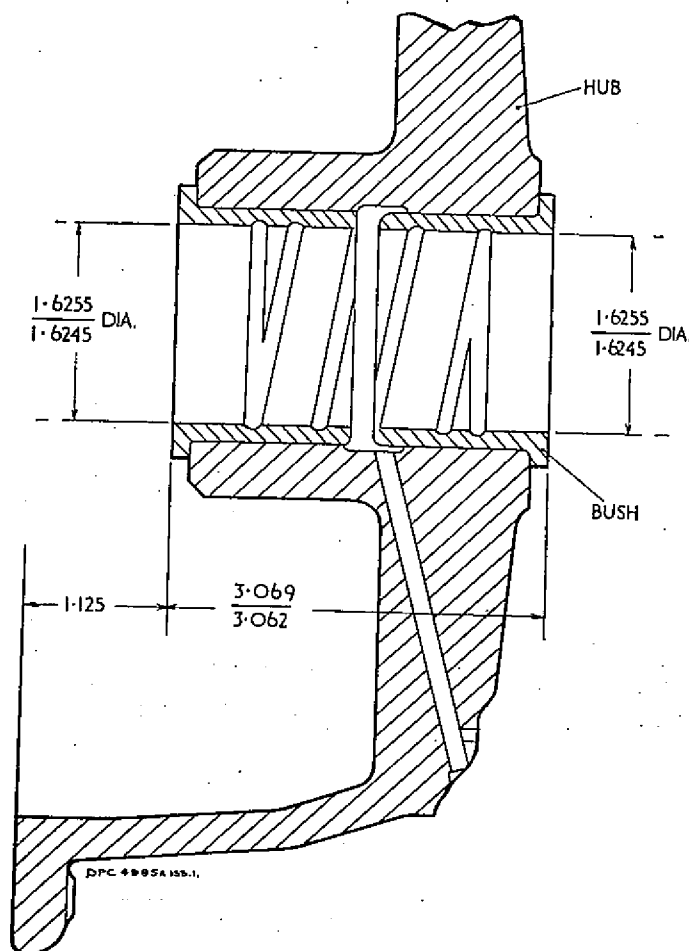


DIMENSIONS IN INCHES

Fig. 1. Machining the hub

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- (6) Treat the machined surfaces with selenious acid solution or if possible re-chromate.
- (7) Coat the external diameter of the bush or bushes and the hub bore with the Araldite and Hardener and press the bush or bushes into position.
- (8) Check with a 0.0015 in. feeler gauge that there is no clearance between the bush flange and the hub.
- (9) Machine the internal diameters of the new bush or bushes and the bush end face to the dimensions given in fig. 2.
5. The repair must be to the satisfaction of the supervisory Inspecting Authority.
6. Using  $\frac{1}{8}$  in. metal stamps, impress the relevant code number adjacent to the wheel assembly number.
- RP.673/1A/V  
1st stage repair, valve side hub.
- RP.673/1A  
1st stage repair, non-valve side hub.
- RP.673/1B/V  
2nd stage repair, valve side hub.
- RP.673/1B  
2nd stage repair, non-valve side hub.
- Treat the bare metal with selenious acid solution. If the wheel has been re-chromated the code number should be stamped before re-chromating.
7. If necessary re-paint the wheel in accordance with Vol. 1, Sect. 1, Chap. 1, and assemble the wheel as instructed in Vol. 1, Book 1, Sect. 1, Chap. 5 and Appendix 60 or 65.



DIMENSIONS IN INCHES

Fig. 2. Machining the bushes

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