

EUROPEAN ORGANISATION
FOR THE SAFETY OF AIR NAVIGATION



EUROCONTROL EXPERIMENTAL CENTRE

**REVISION SUMMARY DOCUMENT
FOR THE
BASE OF AIRCRAFT DATA (BADA)
REVISION 2.5**

EEC Note No. 2/97

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| Abstract: This Revision Summary Document (RSD) describes all changes made to BADA files in Revision 2.5 since the previous release, Revision 2.4. Configuration management procedures for BADA trace all changes through Configuration Change Orders (CCOs). The RSD thus presents a list of all 30 CCOs implemented for BADA 2.5 along with a description for each CCO. | | | | | | |

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**Revision Summary Document
for the
Base of Aircraft Data (BADA) 2.5**

EUROCONTROL Experimental Centre

Summary

This Revision Summary Document (RSD) describes all changes made to BADA files in Revision 2.5 since the previous release, Revision 2.4. Configuration management procedures for BADA trace all changes through Configuration Change Orders (CCOs). The RSD thus presents a list of all 30 CCOs implemented for BADA 2.5 along with a description for each CCO.

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1. INTRODUCTION

1.1 Identification and Scope

This document summarises the changes made to the Base of Aircraft Data (BADA), Revision 2.5 since the previous Revision 2.4.

A general description of BADA Revision 2.5 is provided in the BADA 2.5 User Manual [RD1].

1.2 Organisation

This document is presented in two sections including Section 1, the Introduction. This first section includes a list of referenced documents and a glossary of acronyms.

Section 2, Configuration Change Orders, presents a list of all changes to the BADA files between Revision 2.4 and 2.5. Each change is classified as a Configuration Change Order (CCO). A description for each CCO is also included in this section.

A copy of the Revision Summary File for BADA 2.5 is included as Appendix A.

1.3 Referenced Documents

- RD1** User Manual for the Base of Aircraft Data (BADA) Revision 2.5; EEC Note No. 1/97, January 1997.
- RD2** Configuration Management Manual for the Base of Aircraft Data (BADA), Issue 1.0; Internal EEC Note 4/B2.3/1995, 18 October 1995.
- RD3** Coverage of 1995 European Air Traffic by the Base of Aircraft Data Revision 2.4; EEC Note 13/96, June 1996.
- RD4** Aircraft Type Designators; ICAO Document No. 8643, 24th Edition, January 1994.
- RD5** Equivalences Report for the Base of Aircraft Data (BADA) Revision 2.5; EEC Note No. 30/96; December 1996

1.4 Glossary of Acronyms

| | |
|-------------|--|
| APF | Airline Procedures File |
| BADA | Base of Aircraft Data |
| CAS | Calibrated Airspeed |
| CCO | Configuration Change Order |
| CM | Configuration Management |
| CRCO | Central Route Charges Office |
| EEC | Eurocontrol Experimental Centre |
| ICAO | International Civil Aviation Organisation |
| IPAS | Integrated Preparation and Analysis System |
| OPF | Operations Performance File |
| PTF | Performance Table File |
| RCS | Revision Control System |
| ROD | Rate of Descent |
| RSD | Revision Summary Document |

2. CONFIGURATION CHANGE ORDERS

Table 2-1 below provides a summary of the 30 BADA Configuration Change Orders (CCOs) that were implemented between BADA Revisions 2.4 and 2.5. The use of CCOs as part of the configuration management (CM) procedures for BADA is described in the BADA CM Manual [RD2].

Table 2-1: CCO Summary for BADA 2.5

| CCO Identifier | Title |
|-----------------------|---|
| BADA-CCO-96-01 | New equivalent for B74S |
| BADA-CCO-96-02 | New speedschedule for several turboprops |
| BADA-CCO-96-03 | TB20 fuel consumption corrected |
| BADA-CCO-96-04 | New model for MD80 |
| BADA-CCO-96-05 | Correction of Cf2 in MD80 model |
| BADA-CCO-96-06 | DH83 model added to BADA |
| BADA-CCO-96-07 | New equivalences added for SA4/SA5 |
| BADA-CCO-96-08 | Equivalences for BE36/58 corrected |
| BADA-CCO-96-09 | DH83 Cruise Mach number changed |
| BADA-CCO-96-10 | DH83 descent schedule changed to intermediate |
| BADA-CCO-96-11 | New model for EA32 |
| BADA-CCO-96-12 | CL65 model added to BADA |
| BADA-CCO-96-13 | CL65 Ctc3 value corrected |
| BADA-CCO-96-14 | New model B73S |
| BADA-CCO-96-14 | New synonyms for SweDen 96 |
| BADA-CCO-96-15 | S601 added to SYNONYM.LST/NEW |
| BADA-CCO-96-16 | New model for B737 |
| BADA-CCO-96-17 | New model for B767 |
| BADA-CCO-96-18 | New model for DC9 |
| BADA-CCO-96-19 | Cruise/Descent Mach number FK50 corrected |
| BADA-CCO-96-20 | Cruise CAS B73F corrected |
| BADA-CCO-96-21 | Cruise CAS/Mach B767 corrected |
| BADA-CCO-96-22 | CAS/Mach schedule for Cruise updated |
| BADA-CCO-96-23 | New model for FK10 |

Table 2-1: CCO Summary for BADA 2.5 (continued)

| | |
|----------------|------------------------------|
| BADA-CCO-96-24 | New model for AT42 |
| BADA-CCO-96-25 | New model for BA46 |
| BADA-CCO-96-26 | Correct C551 entry |
| BADA-CCO-96-27 | Correct DA20 cruise speeds |
| BADA-CCO-96-28 | BADA.GPF file added to RCS |
| BADA-CCO-96-29 | Update OPF files to BADA 2.5 |

Please note that there are two CCOs with identical numbers (96-14). This is the result of a numbering error which was made when entering the modifications. Descriptions for each CCO are presented in subsequent pages. For each CCO a description of the change, motivation for the change and a specification of the affected files is provided. If either the OPF or APF file has been changed then the PTF file is re-created with the updated files, although this is not mentioned specifically. For an explanation of symbols referring to BADA coefficients, see the BADA 2.5 User Manual [RD1].

BADA-CCO-96-01**New equivalent for B74S Model**Description of Modification:

B74S equivalent changed from B747 to B74F.

Reason for Modification:

The maximum altitude of the B74F is closer to that of the B74S than the B747.

Files Affected:

| | |
|-------------|----------|
| SYNONYM.LST | modified |
| SYNONYM.NEW | modified |

BADA-CCO-96-02**New speedschedules for several turboprops**Description of Modification:

For 4 turboprop models the speedschedule was changed.

Reason for Modification:

The speedschedule in the APF files did not reflect properly the speeds mentioned in the Flight Manuals.

Files Affected:

| | |
|------------|----------|
| BE90__.APF | modified |
| BE99__.APF | modified |
| E120__.APF | modified |
| PA42__.APF | modified |

BADA-CCO-96-03**TB20 fuel consumption corrected**Description of Modification:

The TB20 fuel consumption has been lowered (from 1.0 to 0.67 kg/min) and the minimum fuel consumption has been set to 0.5.

Reason for Modification:

The TB20 was running out of fuel too early during simulations. Changes were made based on Flight Manual data.

Files Affected:

TB20__.OPF modified

BADA-CCO-96-04**New model for MD80**Description of Modification:

MD80 model was re-developed

Reason for Modification:

The most important BADA models will be re-developed in order to improve model quality.

Files Affected:

| | |
|------------|----------|
| MD80__.OPF | modified |
| MD80__.APF | modified |

BADA-CCO-96-05**Correction for Cf2 in MD80 model**Description of Modification:

Cf2 value was modified in MD80 OPF file

Reason for Modification:

The Cf2 value was inadvertently set to 10. This was corrected to the proper value of 100.

Files Affected:

MD80__.OPF modified

BADA-CCO-96-06**DH83 model added to BADA**Description of Modification:

A new model for the De Havilland Dash 8 -300 (DH83) was added to BADA

Reason for Modification:

The Dash 8 -300 is an aircraft with a significant traffic share (1.2 % according to RD3) which was still missing from BADA. It was added to BADA to increase the coverage of air traffic in Europe.

Files Affected:

| | |
|-------------|----------|
| DH83__.OPF | created |
| DH83__.APF | created |
| SYNONYM.LST | modified |
| SYNONYM.NEW | modified |

BADA-CCO-96-07**New equivalences for SA4/SA5 added**Description of Modification:

New equivalences were added to the SYNONYM.LST/NEW files.

Reason for Modification:

New equivalences had to be added because of real-time simulation requirements for SA4 (NSSG-RVSM) and SA5 (FAA ODID IV).

Files Affected:

| | |
|-------------|----------|
| SYNONYM.LST | modified |
| SYNONYM.NEW | modified |

Note: for an overview of the new equivalences, please refer to RD5.

BADA-CCO-96-08**Equivalences for BE36/58 corrected**Description of Modification:

The equivalences for the BE36/58 models were corrected

Reason for Modification:

The equivalences for the BE36/58 model were not correctly implemented in the SYNONYM.NEW file.

Files Affected:

SYNONYM.NEW modified

BADA-CCO-96-09**DH83 Cruise Mach numbers changed**Description of Modification:

The cruise Mach numbers for the DH83 model were all set to the same value.

Reason for Modification:

In the initial APF file the Mach cruise numbers were set at different values as a function of the weight range. The IPAS program however does not allow this.

Files Affected:

DH83__.APF modified

BADA-CCO-96-10**DH83 Descent schedule changed to intermediate**Description of Modification:

The DH83 low speed schedule was changed to an intermediate schedule

Reason for Modification:

The speed schedule was changed in order to better match current operating procedures (on request of RTO division)

Files Affected:

DH83__.APF

BADA-CCO-96-11**New model for EA32**Description of Modification:

The EA32 model was re-developed

Reason for Modification:

The most important BADA models will be re-developed in order to improve model quality.

Files Affected:

| | |
|------------|----------|
| EA32__.OPF | modified |
| EA32__.APF | modified |

BADA-CCO-96-12**CL65 model added to BADA**Description of Modification:

A model for the Canadair Regional Jet (CL65) was added to BADA.

Reason for Modification:

The CL65 was a model with a significant traffic share (see RD3) that was still missing from the BADA database. The model was added to increase the coverage of European air traffic.

Files Affected:

| | |
|------------|---------|
| CL65__.OPF | created |
| CL65__.APF | created |

BADA-CCO-96-13**CL65 Ctc3 value corrected**Description of Modification:

The value of Ctc3 in the CL65 OPF file was corrected.

Reason for Modification:

The Ctc3 value was not properly entered when adding the CL65 model to BADA.

Files Affected:

CL65__.OPF

BADA-CCO-96-14**New model for B73S**Description of Modification:

The B73S model was re-developed.

Reason for Modification:

The most important BADA models will be re-developed in order to improve model quality.

Files Affected:

| | |
|------------|----------|
| B73S__.OPF | modified |
| B73S__.APF | modified |

BADA-CCO-96-14**New equivalences for SweDen 96 simulations**Description of Modification:

New equivalences were added to the SYNONYM.NEW/LST files

Reason for Modification:

New equivalences were necessary for the SweDen 96 (combined Sweden/Denmark) simulation.

Files Affected:

| | |
|-------------|----------|
| SYNONYM.LST | modified |
| SYNONYM.NEW | modified |

Note: for an overview of the new equivalences, please refer to RD5.

BADA-CCO-96-15**S601 added to SYNONYM.NEW/LST**Description of Modification:

The S601 was added to SYNONYM.LST/NEW.

Reason for Modification:

New requirement for SweDen 96 simulation.

Files Affected:

| | |
|-------------|----------|
| SYNONYM.LST | modified |
| SYNONYM.NEW | modified |

BADA-CCO-96-16**New model for B737**Description of Modification:

The B737 model was re-developed

Reason for Modification:

The most important BADA models will be re-developed in order to improve model quality.

Files Affected:

| | |
|------------|----------|
| B737__.OPF | modified |
| B737__.APF | modified |

BADA-CCO-96-17**New model for B767**Description of Modification:

The B767 model was re-developed

Reason for Modification:

The most important BADA models will be re-developed in order to improve model quality.

Files Affected:

| | |
|------------|----------|
| B767__.OPF | modified |
| B767__.APF | modified |

BADA-CCO-96-18**New model for DC9**Description of Modification:

The DC9 model was re-developed

Reason for Modification:

The most important BADA models will be re-developed in order to improve model quality.

Files Affected:

| | |
|------------|----------|
| DC9___.OPF | modified |
| DC9___.APF | modified |

BADA-CCO-96-19**Cruise/Descent Mach number FK50 changed**Description of Modification:

The Cruise/Descent Mach numbers for the FK50 were changed

Reason for Modification:

Mach numbers were changed to better match Flight Manual procedures.

Files Affected:

FK50__.APF modified

BADA-CCO-96-20**Cruise CAS for B73F changed**Description of Modification:

The Cruise CAS for the B73F was changed

Reason for Modification:

The CAS value was changed to better match Flight Manual procedures.

Files Affected:

B73F__.APF modified

BADA-CCO-96-21**Cruise CAS/Mach for B767 changed**Description of Modification:

The Cruise CAS/Mach schedule for the B767 was changed to better match Flight Manual procedures. (Note: a change to the speedschedule had been made at the special request of Hungarian controllers during the AR40 simulation)

Reason for Modification:

The Cruise CAS/Mach has been changed to better match the Flight Manual procedures.

Files Affected:

B767__.APF modified

BADA-CCO-96-22**CAS/Mach schedule update for Cruise**Description of Modification:

For several models the Cruise CAS/Mach schedule is updated.

Reason for Modification:

CAS/Mach values were changed to better match Flight Manual values and to facilitate the determination of the cruise fuel flow factor. (Note: This CCO number was made specifically to avoid entering a new number every time a speedschedule change was made)

Files Affected:

| | |
|------------|----------|
| B747__.APF | modified |
| B727__.APF | modified |

BADA-CCO-96-23**New model for the FK10**Description of Modification:

The FK10 model was re-developed.

Reason for Modification:

The most important BADA models will be re-developed in order to improve model quality.

Files Affected:

| | |
|------------|----------|
| FK10__.OPF | modified |
| FK10__.APF | modified |

BADA-CCO-96-24**New model for the AT42**Description of Modification:

The AT42 model was re-developed

Reason for Modification:

The most important BADA models will be re-developed in order to improve model quality.

Files Affected:

| | |
|------------|----------|
| AT42__.OPF | modified |
| AT42__.APF | modified |

BADA-CCO-96-25**New model for the BA46**Description of Modification:

The BA46 model was re-developed

Reason for Modification:

The most important BADA models will be re-developed in order to improve model quality.

Files Affected:

| | |
|------------|----------|
| BA46__.OPF | modified |
| BA46__.APF | modified |

BADA-CCO-96-26**Correct C551 entry**Description of Modification:

The C551 entry in SYNONYM.LST was changed from "direct" to "equivalent".

Reason for Modification:

The old entry was incorrect.

Files Affected:

SYNONYM.LST modified

BADA-CCO-96-27**Correct DA20 cruise speeds**Description of Modification:

The cruise speeds for the DA20 model were changed.

Reason for Modification:

During verification of the DA20 Flight Manual, it was found that the old cruise speeds values were incorrect.

Files Affected:

DA20__.APF modified

BADA-CCO-96-28**BADA.GPF file added to RCS**Description of Modification:

The BADA .GPF file was added to RCS

Reason for Modification:

The BADA.GPF is a new file to be released in BADA 2.5. It was added to RCS for configuration management requirements.

Files Affected:

BADA.GPF created

BADA-CCO-96-29**Update OPF files to BADA 2.5**Description of Modification:

All OPF files were updated to BADA 2.5 format. This includes the correction of unit of the stall speeds (from IAS to CAS) and the addition of new parameters.

Reason for Modification:

The OPF files need to be updated before the release of BADA 2.5.

Files Affected:

*.OPF modified

APPENDIX A

Revision Summary File for BADA 2.5

BADA Revision Summary File

Revision Id: 2.5
 Release Date: 96/12/20
 Number of Files: 210

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=====
File Name      Revision      Last Modification      Size      Checksum
( revision    date )              (bytes)
=====
SYNONYM.LST    2.5           2.4.1.6   96/08/12      9721      4066989111
SYNONYM.NEW    2.5           2.4.1.8   96/11/11     13404      1538441656
AT42__.APF     2.5           2.4.1.1   96/09/30      2424      1824358459
AT42__.OPF     2.5           2.4.1.3   96/12/18      4392      1031641043
AT42__.PTF     2.5           2.2.1.2   95/05/18      2424      2023543382
AT72__.APF     2.5           2.4.1.1   96/12/16      4392      1358813226
AT72__.OPF     2.5           2.4.1.1   96/12/16      4392      222408359
AT72__.PTF     2.5           2.3.1.1   95/08/29      5356      405481787
B707__.APF     2.5           2.4.1.1   96/12/16      2424      4206130648
B707__.OPF     2.5           2.4.1.1   96/12/16      4392      3440842247
B707__.PTF     2.5           2.4.1.1   96/09/17      5456      2332514366
B727__.APF     2.5           2.4.1.1   96/09/17      2424      777466703
B727__.OPF     2.5           2.4.1.1   96/12/16      4392      3679440543
B727__.PTF     2.5           2.4.1.1   96/12/16      5456      843454361
B737__.APF     2.5           2.4.1.1   96/08/13      2424      4041818298
B737__.OPF     2.5           2.4.1.2   96/12/16      4392      1530759834
B737__.PTF     2.5           2.4.1.1   96/09/04      5456      551689804
B73F__.APF     2.5           2.4.1.1   96/09/04      2424      2172492853
B73F__.OPF     2.5           2.4.1.1   96/12/16      4392      834249709
B73F__.PTF     2.5           2.4.1.1   96/12/16      5456      3606312414
B73S__.APF     2.5           2.4.1.1   96/07/29      2424      3515635031
B73S__.OPF     2.5           2.4.1.2   96/12/16      4392      4090922135
B73S__.PTF     2.5           2.2.1.1   95/04/24      5456      2800945122
B73V__.APF     2.5           2.4.1.1   96/12/16      2424      2071647125
B73V__.OPF     2.5           2.4.1.1   96/12/16      4392      1709466487
B73V__.PTF     2.5           2.4.1.1   96/09/17      5456      693764572
B747__.APF     2.5           2.4.1.1   96/09/17      2424      3541515870
B747__.OPF     2.5           2.4.1.1   96/12/16      4392      3817425797
B747__.PTF     2.5           2.2.1.1   95/03/03      5456      1439698870
B74F__.APF     2.5           2.4.1.1   96/12/16      2424      4224740271
B74F__.OPF     2.5           2.4.1.1   96/12/16      4392      2374640532
B74F__.PTF     2.5           2.2.1.2   95/05/18      5456      1308761272
B757__.APF     2.5           2.4.1.1   96/12/16      2424      701494118
B757__.OPF     2.5           2.4.1.1   96/12/16      4392      278306376
B757__.PTF     2.5           2.4.1.2   96/09/05      5456      615604796
B767__.APF     2.5           2.4.1.2   96/12/16      2424      2597066009
B767__.OPF     2.5           2.4.1.2   96/12/16      4392      2778027633
B767__.PTF     2.5           2.2.1.2   95/05/18      5456      145835984
BA11__.APF     2.5           2.4.1.1   96/12/16      2424      2977819284
BA11__.OPF     2.5           2.4.1.1   96/12/16      4392      2620460568
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File Name      Revision      Last Modification      Size      Checksum
                ( revision      date )                (bytes)
=====
BA11___.PTF    2.5                                5456      678784
BA31___.APF    2.5          2.2.1.2    95/05/18    2424      3634073647
BA31___.OPF    2.5          2.4.1.1    96/12/16    4392      683420653
BA31___.PTF    2.5                                5376      1351246677
BA41___.APF    2.5          2.2.1.2    95/05/18    2424      1986634972
BA41___.OPF    2.5          2.4.1.1    96/12/16    4392      3526391427
BA41___.PTF    2.5                                5376      1716807102
BA46___.APF    2.5          2.4.1.2    96/10/07    2424      1572856024
BA46___.OPF    2.5          2.4.1.2    96/12/16    4392      221021993
BA46___.PTF    2.5                                5456      1307766251
BADA___.GPF    2.5          2.4.1.5    96/12/11    7566      4022835169
BATP___.APF    2.5          2.2.1.3    95/05/18    2424      2827038231
BATP___.OPF    2.5          2.4.1.1    96/12/16    4392      3211448167
BATP___.PTF    2.5                                5316      2131332667
BE20___.APF    2.5          2.2.1.1    95/03/03    2424      1518722931
BE20___.OPF    2.5          2.4.1.1    96/12/16    4392      2547239648
BE20___.PTF    2.5                                5456      2327252119
BE90___.APF    2.5          2.4.1.1    96/02/09    2424      3392417946
BE90___.OPF    2.5          2.4.1.1    96/12/16    4392      2990407872
BE90___.PTF    2.5                                5396      3191095116
BE99___.APF    2.5          2.4.1.1    96/02/09    2424      734023342
BE99___.OPF    2.5          2.4.1.1    96/12/16    4392      1865465598
BE99___.PTF    2.5                                5456      3097085760
C130___.APF    2.5          2.2.1.1    95/03/03    2424      1596102922
C130___.OPF    2.5          2.4.1.1    96/12/16    4392      1721187575
C130___.PTF    2.5                                5456      1138257584
C421___.APF    2.5          2.3.1.1    95/12/08    2424      2022514455
C421___.OPF    2.5          2.4.1.1    96/12/16    4392      1866123765
C421___.PTF    2.5                                5416      4167731531
C550___.APF    2.5          2.2.1.1    95/03/03    2424      1244988800
C550___.OPF    2.5          2.4.1.1    96/12/16    4392      2213848472
C550___.PTF    2.5                                5456      3735264124
C560___.APF    2.5          2.2.1.1    95/03/03    2424      1469425018
C560___.OPF    2.5          2.4.1.1    96/12/16    4392      2030330651
C560___.PTF    2.5                                5456      2525509901
CL60___.APF    2.5          2.2.1.2    95/05/18    2424      2389095651
CL60___.OPF    2.5          2.4.1.1    96/12/16    4392      4292502559
CL60___.PTF    2.5                                5456      1887105014
CL65___.APF    2.5          2.4.1.1    96/07/24    2424      1343921962
CL65___.OPF    2.5          2.4.1.3    96/12/16    4392      3097533956
=====

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Revision Id: 2.5
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=====
File Name      Revision      Last Modification      Size      Checksum
                ( revision      date )                (bytes)
=====
CL65___.PTF    2.5
D228___.APF    2.5          2.2.1.2    95/03/03    2424    1178131822
D228___.OPF    2.5          2.4.1.1    96/12/16    4392    267368938
D228___.PTF    2.5
D328___.APF    2.5          2.2.1.2    95/05/18    2424    1019460356
D328___.OPF    2.5          2.4.1.1    96/12/16    4392    3709229514
D328___.PTF    2.5
DA01___.APF    2.5          2.2.1.2    95/05/18    2424    2805595833
DA01___.OPF    2.5          2.4.1.1    96/12/16    4392    2237593711
DA01___.PTF    2.5
DA10___.APF    2.5          2.2.1.2    95/05/18    2424    3197370949
DA10___.OPF    2.5          2.4.1.1    96/12/16    4392    4102319366
DA10___.PTF    2.5
DA20___.APF    2.5          2.4.1.1    96/12/10    2424    998059582
DA20___.OPF    2.5          2.4.1.1    96/12/16    4392    17517766
DA20___.PTF    2.5
DA50___.APF    2.5          2.2.1.2    95/05/18    2424    3449139516
DA50___.OPF    2.5          2.4.1.1    96/12/16    4392    1918896796
DA50___.PTF    2.5
DA90___.APF    2.5          2.2.1.2    95/05/18    2424    1078819582
DA90___.OPF    2.5          2.4.1.1    96/12/16    4392    649760467
DA90___.PTF    2.5
DC10___.APF    2.5          2.2.1.1    95/03/03    2424    2986044994
DC10___.OPF    2.5          2.4.1.1    96/12/16    4392    2007775010
DC10___.PTF    2.5
DC8S___.APF    2.5          2.2.1.2    95/05/18    2424    3464780976
DC8S___.OPF    2.5          2.4.1.1    96/12/16    4392    292086727
DC8S___.PTF    2.5
DC9___.APF     2.5          2.4.1.1    96/08/14    2424    1433183583
DC9___.OPF     2.5          2.4.1.2    96/12/16    4392    587233439
DC9___.PTF     2.5
DH83___.APF    2.5          2.4.1.3    96/05/07    2424    3767249485
DH83___.OPF    2.5          2.4.1.2    96/12/16    4392    3599676399
DH83___.PTF    2.5
DH8___.APF     2.5          2.2.1.2    95/05/18    2424    2113129151
DH8___.OPF     2.5          2.4.1.1    96/12/16    4392    346158256
DH8___.PTF     2.5
E120___.APF    2.5          2.4.1.1    96/02/09    2424    182800236
E120___.OPF    2.5          2.4.1.1    96/12/16    4392    1028949
E120___.PTF    2.5
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File Name      Revision      Last Modification      Size      Checksum
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=====
EA30__.APF    2.5           2.2.1.1   95/03/03      2424      4085914737
EA30__.OPF    2.5           2.4.1.1   96/12/16      4392      3636976376
EA30__.PTF    2.5                               5456        961864188
EA31__.APF    2.5           2.2.1.2   95/05/18      2424      3318969175
EA31__.OPF    2.5           2.4.1.1   96/12/16      4392      2476514401
EA31__.PTF    2.5                               5456      2418701372
EA32__.APF    2.5           2.4.1.1   96/07/22      2424      485461319
EA32__.OPF    2.5           2.4.1.2   96/12/17      4392      2000202368
EA32__.PTF    2.5                               5456      2250697129
EA33__.APF    2.5           2.2.1.2   95/05/18      2424      3717495751
EA33__.OPF    2.5           2.4.1.2   96/12/18      4392      3095575631
EA33__.PTF    2.5                               5456      1615414795
EA34__.APF    2.5           2.2.1.1   95/03/03      2424      3841819281
EA34__.OPF    2.5           2.4.1.1   96/12/17      4392      1621951917
EA34__.PTF    2.5                               5456      1497628431
FGTR__.APF    2.5           2.2.1.2   95/05/18      2424      1529673769
FGTR__.OPF    2.5           2.4.1.1   96/12/17      4392      2339405166
FGTR__.PTF    2.5                               5456      3027122185
FK10__.APF    2.5           2.4.1.1   96/09/25      2424      3486213083
FK10__.OPF    2.5           2.4.1.2   96/12/17      4392      2618898831
FK10__.PTF    2.5                               5456      2677216693
FK27__.APF    2.5           2.2.1.1   95/03/03      2424        816017215
FK27__.OPF    2.5           2.4.1.1   96/12/17      4392      2408482634
FK27__.PTF    2.5                               5356      2644136778
FK28__.APF    2.5           2.3.1.1   95/08/29      2424      2210232602
FK28__.OPF    2.5           2.4.1.1   96/12/17      4392      1631612301
FK28__.PTF    2.5                               5456        84507647
FK50__.APF    2.5           2.4.1.1   96/09/03      2424      1792655575
FK50__.OPF    2.5           2.4.1.1   96/12/17      4392      2383672237
FK50__.PTF    2.5                               5376      1400625365
FK70__.APF    2.5           2.3.1.1   95/12/04      2424      136378341
FK70__.OPF    2.5           2.4.1.1   96/12/17      4392      3693610998
FK70__.PTF    2.5                               5456      479765713
HS25__.APF    2.5           2.2.1.2   95/05/18      2424      4149040591
HS25__.OPF    2.5           2.4.1.1   96/12/17      4392      143364115
HS25__.PTF    2.5                               5456      2677364313
L101__.APF    2.5           2.2.1.1   95/03/03      2424      536891197
L101__.OPF    2.5           2.4.1.1   96/12/17      4392      954758010
L101__.PTF    2.5                               5456      3350752176
LR35__.APF    2.5           2.3.1.1   95/08/29      2424      4122306455
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File Name      Revision      Last Modification      Size      Checksum
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=====
LR35___.OPF    2.5           2.4.1.1    96/12/17      4392      1913362062
LR35___.PTF    2.5           2.4.1.1    96/12/17      5456      1640142299
MD11___.APF    2.5           2.2.1.1    95/05/03      2424      2366528846
MD11___.OPF    2.5           2.4.1.1    96/12/17      4392      401852371
MD11___.PTF    2.5           2.4.1.1    96/12/17      5456      2502819337
MD80___.APF    2.5           2.4.1.1    96/03/07      2424      2879952194
MD80___.OPF    2.5           2.4.1.3    96/12/17      4392      525590936
MD80___.PTF    2.5           2.4.1.3    96/12/17      5456      1572962458
MU2___.APF    2.5           2.2.1.1    95/03/03      2424      3805195037
MU2___.OPF    2.5           2.4.1.1    96/12/17      4392      3953587263
MU2___.PTF    2.5           2.4.1.1    96/12/17      5456      2623210826
ND16___.APF    2.5           2.2.1.1    95/03/03      2424      499246672
ND16___.OPF    2.5           2.4.1.1    96/12/17      4392      958896338
ND16___.PTF    2.5           2.4.1.1    96/12/17      5336      2790208107
PA28___.APF    2.5           2.2.1.2    95/05/18      2424      3768398948
PA28___.OPF    2.5           2.4.1.1    96/12/17      4392      768653133
PA28___.PTF    2.5           2.4.1.1    96/12/17      5216      676810906
PA31___.APF    2.5           2.2.1.1    95/03/03      2424      3798401135
PA31___.OPF    2.5           2.4.1.1    96/12/17      4392      218086939
PA31___.PTF    2.5           2.4.1.1    96/12/17      5356      1423961746
PA34___.APF    2.5           2.2.1.2    95/05/18      2424      3355641935
PA34___.OPF    2.5           2.4.1.1    96/12/17      4392      1958707745
PA34___.PTF    2.5           2.4.1.1    96/12/17      5236      3461079860
PA42___.APF    2.5           2.4.1.1    96/02/09      2424      832255150
PA42___.OPF    2.5           2.4.1.1    96/12/17      4392      1170395317
PA42___.PTF    2.5           2.4.1.1    96/12/17      5456      3455260434
PAYE___.APF    2.5           2.2.1.1    95/03/03      2424      545306025
PAYE___.OPF    2.5           2.4.1.1    96/12/17      4392      199686909
PAYE___.PTF    2.5           2.4.1.1    96/12/17      5416      3146404183
PAZT___.APF    2.5           2.2.1.1    95/03/03      2424      3241430555
PAZT___.OPF    2.5           2.4.1.1    96/12/17      4392      2135491380
PAZT___.PTF    2.5           2.4.1.1    96/12/17      5296      2326187370
SF34___.APF    2.5           2.2.1.2    95/05/18      2424      2908757350
SF34___.OPF    2.5           2.4.1.1    96/12/17      4392      667499898
SF34___.PTF    2.5           2.4.1.1    96/12/17      5456      2213273078
SH36___.APF    2.5           2.2.1.2    95/05/18      2424      3871651158
SH36___.OPF    2.5           2.4.1.1    96/12/17      4392      2530529748
SH36___.PTF    2.5           2.4.1.1    96/12/17      5356      1843395529
SW3___.APF    2.5           2.2.1.1    95/03/03      2424      972905653
SW3___.OPF    2.5           2.4.1.1    96/12/17      4392      3480009057
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=====
SW3____.PTF    2.5
TB20____.APF  2.5          2.2.1.2    95/05/18    2424      2917447089
TB20____.OPF  2.5          2.4.1.2    96/12/17    4392      801287659
TB20____.PTF  2.5
TU34____.APF  2.5          2.3.1.1    95/11/09    2424      2333637090
TU34____.OPF  2.5          2.4.1.1    96/12/17    4392      3610158451
TU34____.PTF  2.5
TU54____.APF  2.5          2.3.1.1    95/06/28    2424      1633764090
TU54____.OPF  2.5          2.4.1.1    96/12/17    4392      2985047776
TU54____.PTF  2.5
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