Appendix 1

**GE90-115B ENGINE ESN 9xxxxx**

**AVAILABLE FOR Sale or Lease Q2 2024**

HIGHLY CONFIDENTIAL

# Engine Mini Pack Overview

| | |
|---|---|
| Engine Model: | GE90-115B |
| Engine Serial Number: | 9xxxxx |
| Total Time Since New: | 57,833:59 |
| Total Cycles Since New: | 6,242 |
| Time Since Last Shop Visit: | 10,421:14 |
| Cycles Since Last Shop Visit: | 1,251 |
| LLP Limiter: | 4,741 |

ANA

# LLP SUMMARY SHEET

ALL NIPPON AIRWAYS Co., Ltd.
JCAB Repair Station No.168
3-6-7, Haneda Airport,
Ota-ku, Tokyo, 144-0041, Japan

| | | | |
|---|---|---|---|
| **Status:** | On Status | **Engine Work Order:** | ZDM457 |
| **Operator:** | ANA | **Engine Total Time:** | 57,833:59 |
| **Engine Type Model:** | GE90-115B | **Engine Total Cycle:** | 6,242 |
| **Engine Serial Number:** | 9xxxxx | **Engine Time Since Shop Visit:** | 10,421:14 |
| **MSN:** | 34894 | **Engine Cycle Since Shop Visit:** | 1,251 |
| **Pos:** | 2 | **As of Date:** | 14-Jul-2021 |

| IIN | ATA | ITEM | DESCRIPTION | On Status | | | | | | | | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | P/N | S/N | TSN | CSN | Cycles Usage | | Limit Cycle | | Cycle Remaining | | | |
| | | | | | | | | GE90-110B | GE90-115B | GE90-110B | GE90-115B | GE90-110B | GE90-115B | | |
| A211 | 72-21-00 | 01-030 | Disk, Fan | 2032M68G02 | GWN12RPE | 10,421:14 | 1,251 | 0 | 1251 | 15000 | 15000 | 13749 | 13749 | | |
| A21S | 72-21-00 | 05-570 | Spool, Booster | 351-200-006-0 | BC301900 | 57,833:59 | 6,242 | 0 | 6242 | 15000 | 15000 | 8758 | 8758 | | |
| E217 | 72-26-00 | 01-300 | Shaft, Forward Fan | 2209M10G02 | IHIDL068 | 57,833:59 | 6,242 | 0 | 6242 | 15000 | 15000 | 8758 | 8758 | | |
| G312 | 72-31-00 | 01-600 | Spool, Stage 2-5 | 351-103-112-0 | PC726209 | 10,421:14 | 1,251 | 0 | 1251 | 8800 | 8800 | 7549 | 7549 | | |
| G314 | 72-31-00 | 01-620 | Spool, Stage 7-9 | 2676M00G01 | GWN0D00H | 57,551:14 | 7,059 | 0 | 7059 | 11800 | 11800 | 4741 | 4741 | | |
| G31T | 72-31-00 | 01-710 | Seal, CDP | 2012M71P01 | GWN08J2L | 57,833:59 | 6,242 | 0 | 6242 | 15000 | 15000 | 8758 | 8758 | | |
| G311 | 72-31-00 | 01-530 | Blisk, Stage 1 | 351-101-011-0 | PA699436 | 31,582:32 | 3,301 | 0 | 3301 | 15000 | 15000 | 11699 | 11699 | | |
| G313 | 72-31-00 | 01-610 | Disk, Stage 6 | 351-100-904-0 | BC370968 | 57,833:59 | 6,242 | 0 | 6242 | 11500 | 11500 | 5258 | 5258 | | |
| G31R | 72-31-00 | 01-690 | Ring, Tube Supporter (Impeller) | 351-101-103-0 | DB960456 | 57,833:59 | 6,242 | 0 | 6242 | 15000 | 15000 | 8758 | 8758 | | |
| G318 | 72-31-00 | 01-540 | Shaft, Cone | 351-102-906-0 | DD201226 | 52,783:03 | 5,538 | 0 | 5538 | 15000 | 15000 | 9462 | 9462 | | |
| P53B | 72-53-00 | 01-210 | Seal, Forward | 2517M71P01 | NCU77090 | 10,421:14 | 1,251 | 0 | 1251 | 15000 | 15000 | 13749 | 13749 | | |
| P53M | 72-53-00 | 01-140 | Seal, Interstage | 2505M72P01 | NCU68816 | 10,421:14 | 1,251 | 0 | 1251 | 15000 | 15000 | 13749 | 13749 | | |
| P531 | 72-53-00 | 01-260 | Disk, Stage 1 | 1865M13G08 | GWN12MF5 | 10,421:14 | 1,251 | 0 | 1251 | 14300 | 14300 | 13049 | 13049 | | |
| P532 | 72-53-00 | 01-100 | Disk, Stage 2 | 1865M14P04 | GWN0J5NK | 43,449:32 | 4,849 | 0 | 4849 | 13500 | 13500 | 8651 | 8651 | | |
| P53K | 72-53-00 | 01-070 | Seal, Aft | 1865M17P02 | XAE83022 | 57,833:59 | 6,242 | 0 | 6242 | 15000 | 15000 | 8758 | 8758 | | |
| R57A | 72-56-00 | 10-320 | Disk, Stage 1 | 2209M24P01 | IHIR0094 | 57,833:59 | 6,242 | 0 | 6242 | 15000 | 15000 | 8758 | 8758 | | |
| R57B | 72-56-00 | 10-180 | Disk, Stage 2 | 2209M25P01 | IHIU0071 | 57,833:59 | 6,242 | 0 | 6242 | 15000 | 15000 | 8758 | 8758 | | |
| R57C | 72-56-00 | 10-040 | Disk, Stage 3 | 2209M26P01 | IHIV0084 | 57,833:59 | 6,242 | 0 | 6242 | 15000 | 15000 | 8758 | 8758 | | |
| R57D | 72-56-00 | 05-330 | Disk, Stage 4 | 2209M27P02 | IHIW0068 | 57,833:59 | 6,242 | 0 | 6242 | 15000 | 15000 | 8758 | 8758 | | |
| R57E | 72-56-00 | 05-110 | Disk, Stage 5 | 2209M28P01 | IHIY0047 | 57,833:59 | 6,242 | 0 | 6242 | 15000 | 15000 | 8758 | 8758 | | |
| R57K | 72-56-00 | 05-050 | Disk, Stage 6 | 1765M30P01 | FIAANPV8 | 57,833:59 | 6,242 | 0 | 6242 | 15000 | 15000 | 8758 | 8758 | | |
| R57J | 72-56-00 | 05-230 | Shaft, Cone | 2209M29G01 | IHIDA054 | 57,833:59 | 6,242 | 0 | 6242 | 15000 | 15000 | 8758 | 8758 | | |
| T241 | 72-58-00 | 01-140 | Shaft, Fan Mid | 2209M11G05 | IHIN6376 | 31,582:32 | 3,301 | 0 | 3301 | 15000 | 15000 | 11699 | 11699 | | |
| H321 | 72-32-00 | 20-580 | HPC Stator Forward Case Assembly | 351-104-012-0 | DJ947297 | 10,421:14 | 1,251 | 0 | 1251 | 25380 | 25380 | 24129 | 24129 | | |
| F331 | 72-30-00 | 20-060 | HPC Stator Extension Case | 351-100-110-0 | LA122139 | 57,833:59 | 6,242 | 0 | 6242 | 14000 | 14000 | 7758 | 7758 | | |
| K41A | 72-41-00 | 25-340 | Combustion Case | 2082M19G01 | WIN410EL | 57,833:59 | 6,242 | 0 | 6242 | 18400 | 18400 | 12158 | 12158 | | |
| P52A | 72-52-00 | 01-510 | HPT Case | 2082M18G02 | FCP57GGA | 57,833:59 | 6,242 | 0 | 6242 | 13000 | 13000 | 6758 | 6758 | | |
| Q540 | 72-54-00 | 30-210 | Turbine Center Frame | 2555M17G31 | FCP57K2R | 57,833:59 | 6,242 | 0 | 6242 | --------- | --------- | --------- | --------- | | |
| R561 | 72-56-00 | 10-390 | LPT Case | 2082M85G02 | FCP59JJH | 40,265:14 | 5,456 | 0 | 5456 | 24800 | 24800 | 19344 | 19344 | | |
| S580 | 72-57-00 | 01-570 | Turbine Rear Frame | 2594M07G01 | FRZAC054 | 57,833:59 | 6,242 | 0 | 6242 | --------- | --------- | --------- | --------- | | |

TSN:Time Since New

CSN:Cycle Since New

Production Control
Power Plant Production Management
Engineering Maintenance Center



Kohji Nakajima
Manager

ALL NIPPON AIRWAYS Co., Ltd.
JCAB Repair Station No.168
3-6-7, Haneda Airport,
Ota-ku, Tokyo, 144-0041, Japan

# LLP SUMMARY SHEET

| | | | |
|---|---|---|---|
| **Status:** | On Status | **Engine Work Order:** | ZDM457 |
| **Operator:** | ANA | **Engine Total Time:** | 57,833:59 |
| **Engine Type Model:** | GE90-115B | **Engine Total Cycle:** | 6,242 |
| **Engine Serial Number:** | 9xxxxx | **Engine Time Since Shop Visit:** | 10,421:14 |
| | | **Engine Cycle Since Shop Visit:** | 1,251 |
| | | **As of Date:** | 14-Jul-2021 |

| IIN | ATA | ITEM | DESCRIPTION | On Status | | | | | | | | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | P/N | S/N | TSN | CSN | Cycles Usage | | Limit Cycle | | Cycle Remaining | | | |
| | | | | | | | | GE90-110B | GE90-115B | GE90-110B | GE90-115B | GE90-110B | GE90-115B | | |
| 621A01 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYB033 | 49,508:08 | 5,185 | 0 | 5185 | 30000 | 30000 | 24815 | 24815 | | |
| 621A02 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNY1549 | 63,715:20 | 6,435 | 0 | 6435 | 30000 | 30000 | 23565 | 23565 | | |
| 621A03 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNY3311 | 54,248:36 | 5,612 | 0 | 5612 | 30000 | 30000 | 24388 | 24388 | | |
| 621A04 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYA846 | 49,324:16 | 5,165 | 0 | 5165 | 30000 | 30000 | 24835 | 24835 | | |
| 621A05 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYA759 | 49,324:16 | 5,165 | 0 | 5165 | 30000 | 30000 | 24835 | 24835 | | |
| 621A06 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNY5999 | 49,841:51 | 5,304 | 0 | 5304 | 30000 | 30000 | 24696 | 24696 | | |
| 621A07 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYA750 | 49,324:16 | 5,165 | 0 | 5165 | 30000 | 30000 | 24835 | 24835 | | |
| 621A08 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNY0994 | 58,508:49 | 6,294 | 0 | 6294 | 30000 | 30000 | 23706 | 23706 | | |
| 621A09 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYA867 | 49,324:16 | 5,165 | 0 | 5165 | 30000 | 30000 | 24835 | 24835 | | |
| 621A10 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYA787 | 49,324:16 | 5,165 | 0 | 5165 | 30000 | 30000 | 24835 | 24835 | | |
| 621A11 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYA859 | 49,324:16 | 5,165 | 0 | 5165 | 30000 | 30000 | 24835 | 24835 | | |
| 621A12 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYA849 | 49,324:16 | 5,165 | 0 | 5165 | 30000 | 30000 | 24835 | 24835 | | |
| 621A13 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYG073 | 29,804:52 | 3,038 | 0 | 3038 | 30000 | 30000 | 26962 | 26962 | | |
| 621A14 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYA795 | 49,324:16 | 5,165 | 0 | 5165 | 30000 | 30000 | 24835 | 24835 | | |
| 621A15 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYA777 | 49,324:16 | 5,165 | 0 | 5165 | 30000 | 30000 | 24835 | 24835 | | |
| 621A16 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNY2673 | 56,194:51 | 5,779 | 0 | 5779 | 30000 | 30000 | 24221 | 24221 | | |
| 621A17 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNY5872 | 49,841:51 | 5,304 | 0 | 5304 | 30000 | 30000 | 24696 | 24696 | | |
| 621A18 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNY5754 | 49,841:51 | 5,304 | 0 | 5304 | 30000 | 30000 | 24696 | 24696 | | |
| 621A19 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYA839 | 49,324:16 | 5,165 | 0 | 5165 | 30000 | 30000 | 24835 | 24835 | | |
| 621A20 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNY7762 | 49,324:16 | 5,165 | 0 | 5165 | 30000 | 30000 | 24835 | 24835 | | |
| 621A21 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNY9781 | 49,324:16 | 5,165 | 0 | 5165 | 30000 | 30000 | 24835 | 24835 | | |
| 621A22 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYA946 | 49,324:16 | 5,165 | 0 | 5165 | 30000 | 30000 | 24835 | 24835 | | |

TSN:Time Since New

CSN:Cycle Since New

Production Control
Power Plant Production Management
Engineering Maintenance Center



Kohji Nakajima
Manager

L-QA-21-102
Jul 14th, 2021

# Incident / Accident Clearance Statement

To whom it may concern

This is to certify, to the best of our knowledge, during the operation by All Nippon Airways Co., Ltd. (ANA) below.

I hereby certify, to the best of my knowledge, during the period stated below.

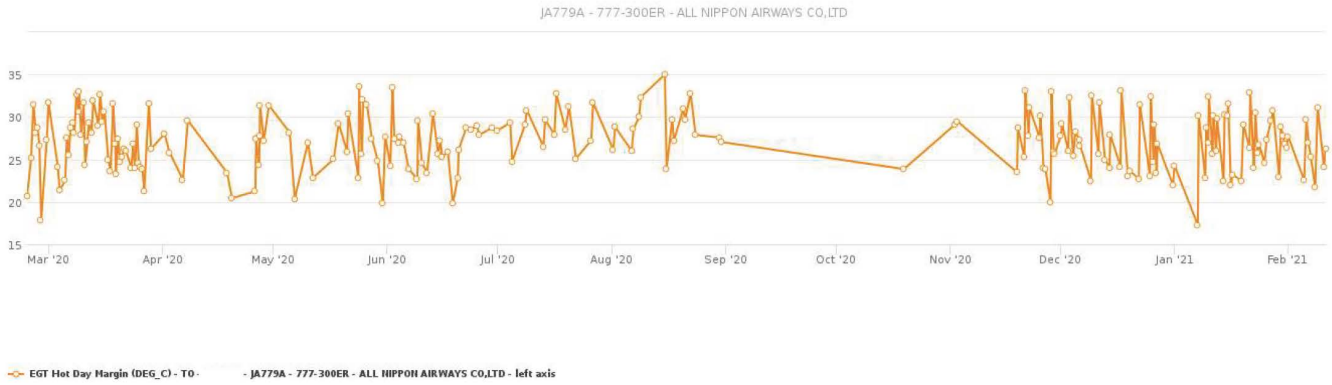
1. The following **Engine** has not been subjected to severe stress, heat damage or immersion in salt water as a result of failure, accident or fire-related incident unless its airworthiness status was re-established by an approved maintenance organization in accordance with the instructions of Boeing and/or OEM of the part, and supported by an authorized airworthiness release certificate.

2. The following Engine has not been sourced from any Government or Military agencies.

| | | |
|---|---|---|
| Engine Part Number | : | GE90-115B |
| Engine Serial Number | : | |
| Period of operation(from / to) | : | April 25th, 2005 / July 14th, 2021 |
| Time Since New | : | 57,833:59 [hour:min] |
| Cycles Since New | : | 6,242 [Cycles] |

P.P. Keiichi Yoshimura

Masahisa Takahashi
Vice President of Quality Assurance Department
All Nippon Airways Co., Ltd.




Signature: D. Onzuka

Prepared by Daisuke Onzuka

Production Control
Power Plant Production Management
Engineering & Maintenance Center
All Nippon Airways Co., Ltd.

As of date: 17-Feb-2021

1) Permitted.

(b) Carbon accumulation

1) Permitted.

(c) Loose (W-seal, leaf-seal, honeycomb) material

1) Do the procedure to estimate serviceability and find when and how to remove the loose material (TASK 72-40-01-200-801-H00).

SUBTASK 72-00-00-220-003-H01

(6) Examine the inner and outer deflectors and the spectacle plate:

NOTE: Examine the spectacle plate if visible.

(a) Distortion and lift-off of the deflector

1) Permitted.

(b) Circumferential or radial cracks in the deflector

1) Permitted.

(c) Missing deflector TBC

1) Permitted.

(d) Missing deflector material

NOTE: Missing metal limits for the outer and inner annulus deflectors are based on the number of exposed cooling holes. As deflector material erodes away, the cooling holes in the spectacle plate are exposed (View E).

**ILF 601, 623-628, 632, 650-799 PRE SB 777-GE100-72-0689**

1) Missing material is permitted on an outer or inner annulus deflector with these conditions:

a) There is a maximum of 25 percent missing material per deflector.

b) The maximum number of exposed spectacle plate cooling holes permitted is 42 per deflector.

NOTE: There are a total of 60 deflectors.

2) Continue-In-Service Limits:

a) The initial inspection interval is 500 cycles.

b) The inspection interval is reduced to 250 cycles on the conditions that follow:

<1> There is between 25 and 50 percent missing material per deflector.

<2> There are between 42 and 84 exposed spectacle plate cooling holes per deflector.

c) The inspection interval is decreased to 150 cycles for the conditions that follow:

<1> There is between 50 and 75 percent missing material for up to 2 outer annulus deflectors (except cups 22 and 24).

<2> There is between 84 and 126 exposed spectacle plate cooling holes for up to 2 outer annulus deflectors (except cups 22 and 24).

<3> Missing material more than 50 percent or 84 exposed spectacle plate cooling holes for deflectors at cups 22 and 24 is permitted for 25 cycles.

(Continued)

| Condition | Maximum Serviceable limits | Continue-In-Service (C-I-S) limits with reduced/repeat inspection |
|---|---|---|
| Bent or curled blade tip | Permitted up to two areas that are four gill holes in length and if they do not go below the tip cap | |
| Tears | Permitted if they do not go below the tip cap | |
| Metal that is missing from the tip on the concave and convex side | Permitted if missing material does not go below the tip cap and the internal cavity is not visible | 10 cycle removal: If the internal cavity is visible. |
| Metal that is missing from the tip on the trailing edge | Permitted if the damage does not go below the first trailing edge slot and the internal cavity is not visible. | 100 cycles: Damage goes below the first trailing edge slot or the internal cavity can be visible with the damage. Axial cracks are permitted up to 0.1 in. (2.54 mm). Radial cracks are permitted up to 0.2 in. (5.1 mm). |
| Blade tips with buildup of first stage shroud material | Permitted | |

SUBTASK 72-00-00-210-011-H01

(11) Examine the HPT rotor first stage blade platform (Figure 614).

NOTE: If you can see a thin radial line along the forward side of the platform and leading edge root, it is from the manufacturing process and is permitted.

(a) Cracks on the pressure side (concave airfoil side) of the platform:

NOTE: The fourth row of platform cooling holes has two holes in it and it aligns with Row 13 of the airfoil cooling hole rows.

NOTE: It is possible that the platform bow can show platform cracking.

NOTE: Metal oxidation shows as green or black discoloration of the metal with surface defects.

| Condition | Maximum Serviceable limits | Continue-In-Service (C-I-S) limits with reduced/repeat inspection |
|---|---|---|
| Cracks from the edge of the platform (no center platform cracks) | Permitted any number of cracks with missing TBC coating | 250 cycles: Crack /TBC spallation with oxidation.<br>100 cycles: If the edge cracks extend radially into the airfoil root radius or the edge cracks are in a V-shape of missing material that extends not more than to the platform cooling holes.<br>25 cycles removal: If edge cracks extend into the airfoil or V-shaped missing material extends into the platform cooling holes. |

SUBTASK 72-00-00-210-008-H01

(13) Examine the HPT rotor second stage blade leading edge.

NOTE: The HPT second stage blade leading edge conditions below (specifically cracks, tears, and missing material) are indications of impact damage. When these conditions are found on 5 more blades, it is recommended to do an inspection of the upstream hardware within 10 cycles to make sure of the serviceability of upstream hardware.

NOTE: The recommended upstream hardware inspection if required includes the HPT stage 2 nozzle, stage 1 shroud and stage 1 nozzle.

NOTE: A flexible borescope minimum length of 3.5 meters is necessary to examine all of the HPT stage 2 nozzle segments and stage 1 shrouds.

NOTE: The leading edge is defined as the region from the LE nose to 0.15 in. (3.81 mm) aft on the concave side, and from the LE nose to 0.20 in. (5.08 mm) aft on the convex side. In the radial direction, the LE region extends from platform to tip. The nose holes are within the LE region (Figure 615).

(a) Cracks or tears

1) All cracks or tears in Area A are permitted if they do not go past the LE region.

2) Cracks or tears are not permitted in Area B.

3) The full HPT stage 2 nozzle assembly must be inspected in or less than 10 cycles of the first time you find HPT second stage blade leading edge cracks.

NOTE: Engines post SB 72-0503 do not need to have the stage 2 nozzles inspected if impact damage is found to the stage 2 blades.

(b) Nicks and dents in Area A

1) Permitted in area A with these conditions:

a) Cracks or tears associated with nicks or dents are permitted if they do not go past the LE region.

<1> The full HPT stage 2 nozzle assembly must be inspected in or less than 10 cycles of the first time you find HPT second stage blade leading edge cracks or tears.

NOTE: Engines post SB 72-0503 do not need to have the stage 2 nozzles inspected if impact damage is found to the stage 2 blades.

b) Continue-In-Service limits for nicks and dents in area A.

<1> Remove the engine within 10 cycles for cracks and/or tears extending past the LE region.

(c) Nick and dents in Area B

1) Permitted if there are no cracks or tears.

(d) Metal that is missing in Area A

1) All amounts permitted if it does not go past the LE region.

a) The full HPT stage 2 nozzle assembly must be inspected in or less than 10 cycles of the first time you find HPT second stage blade leading edge missing material.

NOTE: Engines post SB 72-0503 do not need to have the stage 2 nozzles inspected if impact damage is found to the stage 2 blades.

2) Cracks and/or tears from missing metal must not go past the LE region.

2) Five small dents are permitted if distortion is less than 0.055 inch (1.40 mm) on the opposite side of the blade.

(c) Dents (large) or pieces of metal that are missing

1) Two damaged areas are permitted on the same or opposite sides of the blade with these conditions.

a) The damaged areas are separated by a minimum radial distance of 0.5 inch (12.7 mm) from the leading edge.

b) The damaged areas are separated by a minimum radial distance of 0.394 inch (10.01 mm) from the trailing edge.

(d) Cracks in the dented areas

1) Permitted with these conditions:

a) There are no cracks that go out of the damaged area.

b) Cracks must be less than 0.394 inch (10.01 mm).

(e) Tears

1) Not permitted.

SUBTASK 72-00-00-220-026-H01

(7) Examine the concave and convex surfaces of the LPT rotor blades.

(a) Dents and Nicks

1) Permitted if less than 0.03 inch (0.76 mm) in depth and with these conditions:

a) They are separated by 0.25 inch (6.40 mm) minimum.

b) They do not go through to the opposite side of the blade.

2) Five damaged areas on each side of the blade are permitted when the distortion is less than 0.02 inch (0.51 mm) on the opposite side.

SUBTASK 72-00-00-220-027-H01

(8) Examine the top surface of the blade platform (not to include the blade root radius).

(a) Nick and dents

1) All damage that is less than 0.02 inch (0.51 mm) in depth is permitted.

SUBTASK 72-00-00-220-028-H01

(9) Examine the angel wings.

(a) Examine the OD surface:

1) Material that is rubbed, twisted, or missing is not permitted.

SUBTASK 72-00-00-220-029-H01

(10) Examine the circumferential mate faces on the LPT shroud.

(a) Signs of wear (irregular or jagged)

1) Permitted if there are no signs of wear on the interlock area of the mate face.

SUBTASK 72-00-00-220-030-H01

(11) Examine the LPT shroud interlocks.

NOTE: It is recommended to examine the LPT Stage 6 (S6) blade interlock wear from the aft side of the engine with a borescope.

(a) Wear (irregular or jagged)

1) Permitted if the axial preload is present.

NOTE: Axial preload is the contact between two interlock surfaces.

(b) Shingled or not latched

1) Not permitted.

(c) Wear to the extent that there is no axial preload.

NOTE: Axial preload is the contact between two interlock surfaces.

1) Not permitted.

SUBTASK 72-00-00-210-009-H01

(12) Examine the LPT blades for metal splatter.

(a) Metal splatter on the LPT blades is permitted.

SUBTASK 72-00-00-210-015-H00

(13) Examine the LPT blades stages 1, 2 and 3 for corrosion as follows:

(a) Corrosion on the airfoil and the tip and root fillets

1) Permitted, if there is no missing, chipped or peeled coating.

(b) Corrosion on the platform (and on the forward and aft angel wings)

1) Permitted.

(c) Missing, chipped or peeled coating on the airfoil and the tip and root fillets

1) Not permitted except in nicks or dents.

(d) Missing, chipped or peeled coating on the platform (and on the forward and aft angel wings)

1) Permitted.

SUBTASK 72-00-00-080-004-H01

(14) When the examination is complete turn the borescope light source, SPL-570 off and do this step:

(a) Let the light source blower to stay on for a while to cool the lamp and case.

SUBTASK 72-00-00-420-001-H01

(15) Install the borescope plugs as follow:

(a) Do a visual inspection of the locking insert (lock ring) on the borescope ports for inserts that are loose or missing.

1) Replace locking inserts (lock rings) that are loose or missing with new ones (TASK 70-11-13-960-801-H00).

(b) Do a visual inspection of the borescope plugs for broken, bent or deformed spring fingers.

1) If you find more than one broken or bent spring finger or deformation, replace the borescope plug.

(c) Put pure nickel special compound, D50017 [C02-071] or Milk of Magnesia (unflavored) compound, D50003 [C02-061] on the combustor borescope plug threads.

(d) Install the borescope plugs in LPT ports S and T.

NOTE: Not all engines are equipped with port S.

(e) Tighten the plugs to 110.0-140.0 pound-inches (12.4-15.8 Newton-meters).

ALL NIPPON AIRWAYS Co., Ltd.
JCAB Repair Station No.168
3-6-7, Haneda Airport,
Ota-ku, Tokyo, 144-0041, Japan

# Accessory List

Engine Part Number GE90-115B
Engine Serial Number 9xxxxx
Engine Total Time(hr:min) 56993:12
Engine Total Cycle 6131

as of 30-Nov-2020

| NO | NOMEN | PART NO | SERIAL NO | TSN(hr:min) | CSN | TSLSV(hr:min) | CSLSV |
|---|---|---|---|---|---|---|---|
| 1 | FWD MOUNT ASSY | GE91FWDM0UNT1 | *A784A1 | 43440:37 | 4315 | 43440:37 | 4315 |
| 2 | PLATFORM FWD MOUNT | 1846M30G01 | MMTG3059 | 43440:37 | 4315 | 43440:37 | 4315 |
| 3 | LINK FWD MOUNT | 1691M19G03 | FDU2727D | 43440:37 | 4315 | 43440:37 | 4315 |
| 4 | YOKE FWD MOUNT | 1846M31G01 | FEK288AL | 43440:37 | 4315 | 43440:37 | 4315 |
| 5 | LINK FWD MOUNT | 1691M19G03 | FDU2709D | 43440:37 | 4315 | 43440:37 | 4315 |
| 6 | ECU | Ref: 1962M67P05 | Will be replaced | ----- | ----- | ----- | ----- |
| 7 | OIL TANK | 351-702-106-0 | YW241762Y | 43440:37 | 4315 | 43440:37 | 4315 |
| 8 | DMS SEPARATOR | 1F8550 | YD025700-6 | 43440:37 | 4315 | 43440:37 | 4315 |
| 9 | SENSOR DMS | 1G2977-2 | YD001323A | 43440:37 | 4315 | 43440:37 | 4315 |
| 10 | SENSOR OIL LEVEL | 8TJ146CFB1 | YE015977P | 43440:37 | 4315 | 43440:37 | 4315 |
| 11 | CONT-CTAI | 810503-9 | 3161 | 35628:47 | 3560 | 23805:15 | 2438 |
| 12 | SENSOR IP BLEED | 1151072-2 | 1151072-04063 | 53931:47 | 5588 | 36888:15 | 3760 |
| 13 | CONT-PRSOV | 3399102-30 | 1629 | 56546:20 | 6026 | 8752:15 | 1027 |
| 14 | CONTRLR-HPFAC | 3399100-31 | 2319 | 43440:37 | 4315 | 43440:37 | 4315 |
| 15 | IDG_B7_GE/PW | 767146A | AAAG001731 | 54066:49 | 7720 | 9580:27 | 1140 |
| 16 | HEAT EXCHANGER<B73E> | UA544011-1 | UDDF0275 | 56993:12 | 6131 | 9580:27 | 1140 |
| 17 | OIL COOLER | UA541463-4 | UDDL0458 | 56993:12 | 6131 | 9580:27 | 1140 |
| 18 | COOLER | UA541464-6 | UDDP0470 | 56993:12 | 6131 | 9580:27 | 1140 |
| 19 | VSCF GENE_B7 | 1701768 | 20328 | 43309:14 | 21506 | 5511:37 | 636 |
| 20 | EDP <B73&B72> | 66132-04 | K1169 | 46944:11 | 18780 | 9580:27 | 1140 |
| 21 | IP CK VLV B73E | 3202804-1 | 1885 | 36670:10 | 3456 | 1422:32 | 167 |
| 22 | PRSOV/HPSOV | 3215302-4 | 193CA | 48342:40 | 18414 | 3381:36 | 390 |
| 23 | AFT MOUNT ASSY | GE91AFTM0UNT1 | | 56993:12 | 6131 | 9580:27 | 1140 |
| 24 | PLATFORM AFT MOUNT | 1846M33G02 | MMTF2405 | 56993:12 | 6131 | 9580:27 | 1140 |
| 25 | LINK ATF MOUNT | 1846M36G01 | CDAAA643 | 56993:12 | 6131 | 9580:27 | 1140 |
| 26 | LINK AFT MOUNT-R | 1846M35G01 | HAGAA034 | 56993:12 | 6131 | 9580:27 | 1140 |
| 27 | LINK | 1846M37P01 | FEK025AT | 56993:12 | 6131 | 9580:27 | 1140 |
| 28 | TREE | 1846M34G01 | MMTF2413 | 56993:12 | 6131 | 9580:27 | 1140 |
| 29 | LINK | 1846M29G03 | FBKRJ056 | 56993:12 | 6131 | 9580:27 | 1140 |
| 30 | LINK | 1846M29G04 | FBKRK060 | 56993:12 | 6131 | 9580:27 | 1140 |
| 31 | MAIN FUEL PUMP | 838000-2 | 8027 | 41059:28 | 4564 | 9580:27 | 1140 |
| 32 | SENSOR F/F DELTA P | APT8A1500-120D | K23527 | 9580:27 | 1140 | 9580:27 | 1140 |
| 33 | FUEL MANI PRESS SNSR | APT151250-950A | KULG1955 | 56993:12 | 6131 | 9580:27 | 1140 |
| 34 | PT25 SENSOR | 0154GF10 | YA002579 | 56993:12 | 6131 | 9580:27 | 1140 |
| 35 | UNIT-HYD MECHANICAL | 8061-695 | WYGB5639 | 46298:32 | 4908 | 9580:27 | 1140 |
| 36 | ALTERNATOR STATOR | 9049385-5 | GJA36313 | 49834:14 | 5159 | 9580:27 | 1140 |
| 37 | ALTERNATOR ROTOR | 9049380-1 | GJB99928 | 9580:27 | 1140 | 9580:27 | 1140 |
| 38 | SENSOR T3 | 8TC58AAH1 | YE020082P | 56993:12 | 6131 | 9580:27 | 1140 |
| 39 | FUEL FLOW METER | 8TJ124ERJ1 | 18590 | 41400:34 | 4602 | 9580:27 | 1140 |
| 40 | EXCITER | 10-631045-2 | UNJW7660 | 56993:12 | 6131 | 9580:27 | 1140 |
| 41 | EXCITER | 10-631045-2 | UNJW7280 | 56993:12 | 6131 | 9580:27 | 1140 |
| 42 | EDUCATOR VLV | 421775 | WCP0355R | 42784:46 | 4625 | 18976:10 | 2046 |
| 43 | LPTV <B73E> | 5010758-103 | PFBATS63 | 40039:32 | 3901 | 4834:11 | 559 |
| 44 | CCC VALVE | 5010759-103 | AUC77 | 4894:42 | 567 | 4894:42 | 567 |
| 45 | HPTCC VALVE | 5910500-106 | PFBANJ88 | 56237:28 | 6063 | 9932:00 | 1175 |
| 46 | VBV ACTUATOR | 880400-1005 | PFBANK11 | 56993:12 | 6131 | 56993:12 | 6131 |
| 47 | VBV ACTUATOR | 880400-1005 | PFBANH37 | 56993:12 | 6131 | 56993:12 | 6131 |
| 48 | ACTUATOR VSV | 351-704-801-0 | YM135133V | 56993:12 | 6131 | 9580:27 | 1140 |
| 49 | ACTUATOR VSV | 351-704-801-0 | YM135132W | 56993:12 | 6131 | 9580:27 | 1140 |
| 50 | SENSO N1 | 330-005-702-0 | YJ383067-6 | 56993:12 | 6131 | 9580:27 | 1140 |
| 51 | SENSOR N2 | 320-802-402-0 | YJ005576A | 56993:12 | 6131 | 9580:27 | 1140 |
| 52 | EGT PROBE | 8TC34ABW1 | DT0513H | 9580:27 | 1140 | 9580:27 | 1140 |
| 53 | EGT PROBE | 8TC34ABW1 | DT6975H | 9580:27 | 1140 | 9580:27 | 1140 |
| 54 | EGT PROBE | 8TC34ABW1 | DTD9746 | 38340:25 | 4284 | 9580:27 | 1140 |
| 55 | EGT PROBE | 8TC34ABW1 | DT75889 | 42608:45 | 4738 | 9580:27 | 1140 |
| 56 | EGT PROBE | 8TC34ABW1 | DT76415 | 42608:45 | 4738 | 9580:27 | 1140 |
| 57 | EGT PROBE | 8TC34ABW1 | DT83475 | 41059:28 | 4564 | 9580:27 | 1140 |
| 58 | EGT PROBE | 8TC34ABW1 | DT76430 | 42608:45 | 4738 | 9580:27 | 1140 |
| 59 | EGT PROBE | 8TC34ABW1 | DT0364H | 9580:27 | 1140 | 9580:27 | 1140 |
| 60 | NO1 BRG ACCMTR | 144-159-000-501 | VBRBR160 | 56993:12 | 6131 | 9580:27 | 1140 |
| 61 | TCF ACCELEMETER | 144-706-000-501 | VBRBT333 | 42657:07 | 4468 | 9580:27 | 1140 |
| 62 | F/O HEAT EXCHANGER | UA541461-12 | UDDC0469A | 59180:19 | 6228 | 9580:27 | 1140 |
| 63 | PUMP L/S | 40F6020 | YT116284 | 55721:09 | 5760 | 9580:27 | 1140 |
| 64 | ANTI LEAK VALVE | 40F0002 | YT040364-6 | 56993:12 | 6131 | 56993:12 | 6131 |
| 65 | SENSOR OIL PRESS | APT7B1500-7BARD | YK001020R | 56993:12 | 6131 | 9580:27 | 1140 |
| 66 | STARTER<B73ER> | 3505830-12 | YG005614-1 | 56993:12 | 6131 | 9580:27 | 1140 |
| 67 | VLV STARTER<B73ER> | 3291677-2 | GRTS0461 | 56993:12 | 6131 | 9580:27 | 1140 |
| 68 | VLV-COWL TAI_B7 | 810502-3 | 2006030484 | 39304:07 | 12805 | 1422:32 | 167 |
| 69 | COOLER CONT AY | 808650-5 | 20041204-43 | 56993:12 | 6131 | 9580:27 | 1140 |
| 70 | FUEL FILTER ASSY | AEB999-30 | D9214 | 12340:44 | 1398 | 12340:44 | 1398 |
| 71 | SENSOR OIL PRESS | APT7B1500-7BARD | YK000987-6 | 56993:12 | 6131 | 9580:27 | 1140 |
| 72 | NOZZLE AY EXHAUST | 2204M24G02 | 06G06654 | 46670:36 | 4792 | 46670:36 | 4792 |
| 73 | CENTER BODY FWD | 2204M21G05 | 06G06654 | 46670:36 | 4792 | 46670:36 | 4792 |
| 74 | CENTER BODY ASSY-AFT | 2204M22G02 | 06G06654 | 46670:36 | 4792 | 46670:36 | 4792 |

【Remarks】
The marking "*" in the top of SERIAL NO means that "No piece parts exposed during ANA operation",
so this PART NO and SERIAL NO is temporally assigned.
TSN:Time Since New
CSN:Cycle Since New
TSLSV:Time Since Last Shop Visit
CSLSV:Cycle Since Last Shop Visit

M. Shirashima

Production Control
Power Plant Production Management
Engineering Maintenance Center



Miki Shirashima
Assistant Manager

# ANA GE90-115B AIRWORTHINESS DIRECTIVES STATUS LIST (AD LIST)

Revision Date of this file: 14-Jul-2021
FAA AD Bi-Weekly: 2021-14
MSN / Registration No.: 34894 / JA779A

Engine Serial Number: 9xxxxx
Engine Total Time (hr:min): 57,833:59 (as of 14-Jul-2021)
Engine Total Cycles: 6,242 (as of 14-Jul-2021)
Manufactured Date: 17-Feb-2005

C : Close(Terminated) / O : Open / N : Not Applicable / S : Superseded

| TCD No. | FAA AD No. | Relevant Service Bulletin | Description | Status | Reccuring Inspection | Remarks |
|---|---|---|---|---|---|---|
| 6988-1-2009 | 2006-20-51 | GE90-100 SB 73-0021<br>GE90-100 SB 73-A0028 | Revising AFM to prohibit takeoffs at less than full-rated thrust | C | - | Completed<br>Current Software Version A.0.7.5 |
| N/A | 2007-10-05 | Not Applicable | Removing certain TCFs from service before exceeding 14,300 flight cycles | N | - | N/A by Installed P/N : 2555M17G31 |
| 7626-2010 | 2009-25-14 | GE90-100 SB 72-0260<br>GE90-100 SB 72-0279<br>GE90-100 SB 72-0313 | Initial and repetitive inspections for shroud interlock wear of the stage 6 LPT blades | C | - | Completed on 27-Jul-2009<br>(Installed LPT6 BLD P/N : 1765 M69P03) |
| 7725-2010 | 2010-16-12 | 777-78A0070<br>GE90-100 SB 79-0017<br>GE90-100 SB 79-0019 | Replace insulation branket fasteners of the lower aft cowl of the thrust reverser and inspect/replace TRF oil scavenge tube | C | - | ・SB 79-0017 completed on 06-Mar-2008<br>・SB 79-0019 completed on 21-Sep-2008 |
| 8018-2012 | 2011-26-11 | GE90-100 SB 72-0320<br>GE90-100 SB 72-0360 | ECI or Spot FPI of the stage 1-2 Rotating Seal Teeth of the HPC Stages 2-5 Spool | C | - | ・SB 72-0320 Completed on 07-Feb-2013<br>・SB 72-0360 Completed on 07-Feb-2013<br>(Installed P/N : 351-103-112-0) |
| 8227-2013 | 2013-10-52 | See 2013-15-20 | Prohibits operation of an airplane with affected TGB radial gearshafts installed on any engine | S | - | Superseded by AD 2013-14-51 |
| 8227A-2013 | 2013-14-51 | See 2013-15-20 | Prohibits operation of an airplane with affected TGB radial gearshafts installed on any engine | S | - | Superseded by AD 2013-15-20 |
| 8227B-2014 | 2013-15-20 | GE90-100 SB 72-A0568<br>GE90-100 SB 72-0569<br>GE90-100 SB 72-0563 | Prohibits operation of an airplane with affected TGB radial gearshafts installed on any engine | C | - | Completed on 09-Mar-2018<br>Installed P/N : 2115M33G11 |
| 8311-2014 | 2013-17-07 | GE90-100 SB 72-0528 | Initial and Repetitive On-Wing Borescope Inspection(BSIs) for Corrosion and Oxidation, of the Affected Stage 1 HPT Stator Shrouds | N | - | N/A by Installed P/N : 1847M52P18 |

# ANA GE90-115B AIRWORTHINESS DIRECTIVES STATUS LIST (AD LIST)

Revision Date of this file: 14-Jul-2021
FAA AD Bi-Weekly: 2021-14
MSN / Registration No.: 34894 / JA779A

Engine Serial Number: 9xxxxx
Engine Total Time (hr:min): 57,833:59 (as of 14-Jul-2021)
Engine Total Cycles: 6,242 (as of 14-Jul-2021)
Manufactured Date: 17-Feb-2005

C : Close(Terminated) / O : Open / N : Not Applicable / S : Superseded

| TCD No. | FAA AD No. | Relevant Service Bulletin | Description | Status | Reccuring Inspection | Remarks |
|---|---|---|---|---|---|---|
| 8334-2014 | 2013-23-18 | GE90-100 SB 73-0069 | Replacement of Variable Bypass Valve Actuator Fuel Supply Tube with a Part Eligible for Installation | C | - | Completed on 07-Feb-2013 |
| 8333-2014 | 2013-24-17 | See 2018-20-23 | Removing certain HPC rotor stage 2-5 spools from service | S | - | Superseded by AD 2017-07-04 |
| 8333A-2017 | 2017-07-04 | See 2018-20-23 | Removing certain HPC rotor stage 2-5 spools from service | S | - | Superseded by AD 2018-20-23 |
| 8966-2017 | 2017-08-06 | GE90-100 SB 79-0034 | Replacing affected fuel/oil lube/servo coolers ("main fuel oil heat exchangers") | C | - | Completed on 19-Jan-2017 (Installed P/N :UA541461-12, S/N : UDDC0469A) |
| 9191-2018 | 2018-20-22 | GE90-100 SB 72-0788<br>GE90-100 SB 72-0793<br>GE90-100 SB 72-0784 | Removal of affected Combustion Cases from Service | N | - | N/A by installed<br>P/N : 2082M19G01<br>S/N : WIN410EL |
| 8333B-2018 | 2018-20-23 | GE90-100 SB 72-0499<br>GE90-100 SB 72-0659<br>GE90-100 SB 72-0714 | Removing certain HPC rotor stage 2-5 spools from service | N | - | N/A by Installed<br>P/N : 351-103-112-0<br>S/N : PC726206 |
| 9383-2019 | 2019-21-51 | GE90-100 SB 72-A0826 | Removal from service of the GE90-115B model turbofan engine interstage seal, P/N 2505M72P01, from the affected engines | N | - | N/A by installed<br>P/N : 2505M72P01<br>S/N : NCU68816 |
| 9461-2020 | 2020-01-55 | GE90-100 SB 72-A0839 | Removal from service the interstage HPT rotor seal P/N 2505M72P01 or 2448M33P01 from the affected engines | N | - | N/A by installed<br>P/N : 2505M72P01<br>S/N : NCU68816 |
| 9571-2020 | 2020-10-04 | GE90-100 SB 72-A0841<br>GE90-100 SB 72-0830 | Initial and repetitive USI of the interstage HPT rotor seal / Replacement of the interstage HPT rotor seal | N | - | N/A by installed<br>P/N : 2505M72P01<br>S/N : NCU68816 |
| N/A | 2020-18-14 | GE90-100 SB 72-0838 | Ultrasonic inspection (USI) of the HPT rotor stage 2 disk | N | - | N/A by installed<br>P/N : 1865M14P04<br>S/N : GWN0J5NK |

# ANA GE90-115B AIRWORTHINESS DIRECTIVES STATUS LIST (AD LIST)

Revision Date of this file: 14-Jul-2021
FAA AD Bi-Weekly: 2021-14
MSN / Registration No.: 34894 / JA779A

Engine Serial Number: 9xxxxx
Engine Total Time (hr:min): 57,833:59 (as of 14-Jul-2021)
Engine Total Cycles: 6,242 (as of 14-Jul-2021)
Manufactured Date: 17-Feb-2005

C : Close(Terminated) / O : Open / N : Not Applicable / S : Superseded

| TCD No. | FAA AD No. | Relevant Service Bulletin | Description | Status | Reccuring Inspection | Remarks |
|---|---|---|---|---|---|---|
| 9653-2020 | 2020-20-17 | GE90-100 SB 73-0117 | Revision of the existing FAA-approved MEL by incorporating the dispatch restrictions | O | Not Applicable | ANA added MEL Bulletin 20-5 referring SB 73-0117 checking procedure into B777 MEL73-21-04 on 31-Jul-2020. |
| 9656-2020 | 2020-21-13 | GE90-100 SB 72-0845 | Replacement of the affected HPT rotor stage 2 disks and rotating CDP HPT seals | N | - | N/A by Engine Serial Number |

**Engineering & Maintenance Center**
**Power Plant Production Management**
**Production Control**

| | |
|---|---|
| Signature: | K. Nakajima |
| Prepared by: | Kohji Nakajima |
| Date: | 14-Jul-2021 |

Appendix 2

## GE90-115B ENGINE ESN 9xxxxx

## AVAILABLE FOR Sale or Lease Q2 2024

HIGHLY CONFIDENTIAL

Available Immediately

# Engine Mini Pack Overview

| | |
|---|---|
| Engine Model: | GE90-115B |
| Engine Serial Number: | 9xxxxx |
| Total Time Since New: | 59,498:01 |
| Total Cycles Since New: | 6,253 |
| Time Since Last Shop Visit: | 7,958:26 |
| Cycles Since Last Shop Visit: | 949 |
| LLP Limiter: Seal, Forward | 3,851 |

ALL NIPPON AIRWAYS Co., Ltd.
JCAB Repair Station No.168
3-6-7, Haneda Airport,
Ota-ku, Tokyo, 144-0041, Japan

# LLP SUMMARY SHEET

| | | | |
|---|---|---|---|
| **Status:** | On Status | **Engine Work Order:** | CNB038 |
| **Operator:** | ANA | **Engine Total Time:** | 59,498:01 |
| **Engine Type Model:** | GE90-115B | **Engine Total Cycle:** | 6,253 |
| **Engine Serial Number:** | 9xxxxx | **Engine Time Since Shop Visit:** | 7,958:26 |
| **MSN:** | 27940 | **Engine Cycle Since Shop Visit:** | 949 |
| **Pos:** | 2 | **As of Date:** | 16-Jun-2021 |

| IIN | ATA | ITEM | DESCRIPTION | On Status | | | | | | | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | P/N | S/N | TSN | CSN | Cycles Usage | | Limit Cycle | | Cycle Remaining | | |
| | | | | | | | | GE90-110B | GE90-115B | GE90-110B | GE90-115B | GE90-110B | GE90-115B | |
| 621A01 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCV76 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |
| 621A02 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCY54 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |
| 621A03 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCV58 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |
| 621A04 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCW44 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |
| 621A05 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCK98 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |
| 621A06 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCU50 | 41,980:16 | 4,262 | 0 | 4262 | 30000 | 30000 | 25738 | 25738 | |
| 621A07 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCW49 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |
| 621A08 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCY09 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |
| 621A09 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCU76 | 42,645:39 | 4,585 | 0 | 4585 | 30000 | 30000 | 25415 | 25415 | |
| 621A10 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCW15 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |
| 621A11 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCY96 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |
| 621A12 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCV74 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |
| 621A13 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNY2509 | 58,513:18 | 5,923 | 0 | 5923 | 30000 | 30000 | 24077 | 24077 | |
| 621A14 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCV21 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |
| 621A15 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYD010 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |
| 621A16 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCV30 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |
| 621A17 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCW33 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |
| 621A18 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCV47 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |
| 621A19 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCW43 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |
| 621A20 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCV23 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |
| 621A21 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCR17 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |
| 621A22 | 72-00-00 | 09-230 | Blade, Fan Rotor Stage 1 | 2012M92G03 | CFNYCW41 | 40,988:11 | 4,172 | 0 | 4172 | 30000 | 30000 | 25828 | 25828 | |

TSN:Time Since New

CSN:Cycle Since New

Production Control
Power Plant Production Management
Engineering Maintenance Center

Kohji Nakajima
Manager

ALL NIPPON AIRWAYS Co., Ltd.
JCAB Repair Station No.168
3-6-7, Haneda Airport,
Ota-ku, Tokyo, 144-0041, Japan

# LLP SUMMARY SHEET

| | | | |
|---|---|---|---|
| **Status:** | **On Status** | **Engine Work Order:** | **CNB038** |
| **Operator:** | **ANA** | **Engine Total Time:** | **59,498:01** |
| **Engine Type Model:** | **GE90-115B** | **Engine Total Cycle:** | **6,253** |
| **Engine Serial Number:** | **9xxxxx** | **Engine Time Since Shop Visit:** | **7,958:26** |
| **MSN:** | **27940** | **Engine Cycle Since Shop Visit:** | **949** |
| **Pos:** | **2** | **As of Date:** | **16-Jun-2021** |

| IIN | ATA | ITEM | DESCRIPTION | On Status | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | P/N | S/N | TSN | CSN | Cycles Usage | | Limit Cycle | | Cycle Remaining | | Remarks |
| | | | | | | | | GE90-110B | GE90-115B | GE90-110B | GE90-115B | GE90-110B | GE90-115B | |
| A211 | 72-21-00 | 01-030 | Disk, Fan | 2032M68G01 | GWN89EP4 | 59,498:01 | 6,253 | 0 | 6253 | 15000 | 15000 | 8747 | 8747 | |
| A218 | 72-21-00 | 05-570 | Spool, Booster | 351-200-006-0 | BC335292 | 59,498:01 | 6,253 | 0 | 6253 | 15000 | 15000 | 8747 | 8747 | |
| E217 | 72-26-00 | 01-300 | Shaft, Forward Fan | 2209M10G02 | IHIDL079 | 59,498:01 | 6,253 | 0 | 6253 | 15000 | 15000 | 8747 | 8747 | |
| G312 | 72-31-00 | 01-600 | Spool, Stage 2-5 | 351-103-110-0 | PC160932 | 25,221:18 | 2,682 | 0 | 2682 | 8200 | 8200 | 5518 | 5518 | |
| G314 | 72-31-00 | 01-620 | Spool, Stage 7-9 | 2032M23G01 | GWN09A7A | 59,498:01 | 6,253 | 0 | 6253 | 11800 | 11800 | 5547 | 5547 | |
| G31T | 72-31-00 | 01-710 | Seal, CDP | 2012M71P02 | GWN09GFH | 59,498:01 | 6,253 | 0 | 6253 | 15000 | 15000 | 8747 | 8747 | |
| G311 | 72-31-00 | 01-530 | Blisk, Stage 1 | 351-101-011-0 | PC135378 | 25,221:18 | 2,682 | 0 | 2682 | 15000 | 15000 | 12318 | 12318 | |
| G313 | 72-31-00 | 01-610 | Disk, Stage 6 | 351-100-904-0 | BC383391 | 59,498:01 | 6,253 | 0 | 6253 | 11500 | 11500 | 5247 | 5247 | |
| G31R | 72-31-00 | 01-690 | Ring, Tube Supporter (Impeller) | 351-101-103-0 | DC880312 | 59,498:01 | 6,253 | 0 | 6253 | 15000 | 15000 | 8747 | 8747 | |
| G318 | 72-31-00 | 01-540 | Shaft, Cone | 351-102-806-0 | PC059610 | 25,221:18 | 2,682 | 0 | 2682 | 15000 | 15000 | 12318 | 12318 | |
| P53B | 72-53-00 | 01-210 | Seal, Forward | 1865M19P02 | NCE580CH | 49,234:20 | 5,149 | 0 | 5149 | 9000 | 9000 | 3851 | 3851 | |
| P53M | 72-53-00 | 01-140 | Seal, Interstage | 2503M72P01 | GWN0TK6T | 25,221:18 | 2,682 | 0 | 2682 | 15000 | 15000 | 12318 | 12318 | |
| P531 | 72-53-00 | 01-260 | Disk, Stage 1 | 2445M04G08 | GWN0EBHM | 49,234:20 | 5,149 | 0 | 5149 | 14300 | 14300 | 9151 | 9151 | |
| P532 | 72-53-00 | 01-100 | Disk, Stage 2 | 1865M14P04 | TMT4RD67 | 25,221:18 | 2,682 | 0 | 2682 | 13500 | 13500 | 10818 | 10818 | |
| P53K | 72-53-00 | 01-670 | Seal, Aft | 1865M17P02 | XAE83190 | 49,234:20 | 5,149 | 0 | 5149 | 15000 | 15000 | 9851 | 9851 | |
| R57A | 72-56-00 | 10-320 | Disk, Stage 1 | 2209M24P01 | IHIR0525 | 51,481:03 | 5,402 | 0 | 5402 | 15000 | 15000 | 9508 | 9508 | |
| R57B | 72-56-00 | 10-190 | Disk, Stage 2 | 2209M25P01 | IHIU0192 | 51,481:03 | 5,402 | 0 | 5402 | 15000 | 15000 | 9508 | 9508 | |
| R57C | 72-56-00 | 10-040 | Disk, Stage 3 | 2209M26P01 | IHIV0474 | 51,481:03 | 5,402 | 0 | 5402 | 15000 | 15000 | 9508 | 9508 | |
| R57D | 72-56-00 | 05-330 | Disk, Stage 4 | 2209M27P02 | IHIW0248 | 51,481:03 | 5,402 | 0 | 5402 | 15000 | 15000 | 9508 | 9508 | |
| R57E | 72-56-00 | 05-110 | Disk, Stage 5 | 2209M28P01 | IHIY0432 | 51,481:03 | 5,402 | 0 | 5402 | 15000 | 15000 | 9508 | 9508 | |
| R57K | 72-56-00 | 05-050 | Disk, Stage 6 | 1765M30P01 | FIAAVH28 | 51,481:03 | 5,402 | 0 | 5402 | 15000 | 15000 | 9508 | 9508 | |
| R57J | 72-56-00 | 05-230 | Shaft, Cone | 2209M29G01 | IHIDA016 | 51,481:03 | 5,402 | 0 | 5402 | 15000 | 15000 | 9508 | 9508 | |
| T241 | 72-58-00 | 01-140 | Shaft, Fan Mid | 2209M11G05 | IHIN6782 | 25,221:18 | 2,682 | 0 | 2682 | 15000 | 15000 | 12318 | 12318 | |
| H321 | 72-32-00 | 20-580 | HPC Stator Forward Case Assembly | 351-104-010-0 | DC830556 | 59,498:01 | 6,253 | 0 | 6253 | 25380 | 25380 | 19127 | 19127 | |
| F331 | 72-30-00 | 20-060 | HPC Stator Extension Case | 351-100-112-0 | DK404183 | 25,221:18 | 2,682 | 0 | 2682 | 14000 | 14000 | 11318 | 11318 | |
| K41A | 72-41-00 | 25-340 | Combustion Case | 2062M19G01 | GEVKTJ09 | 49,234:20 | 5,149 | 0 | 5149 | 18400 | 18400 | 13251 | 13251 | |
| P62A | 72-52-00 | 01-510 | HPT Case | 2062M16G02 | FCP55D30 | 49,234:20 | 5,149 | 0 | 5149 | 13000 | 13000 | 7851 | 7851 | |
| Q540 | 72-54-00 | 30-210 | Turbine Center Frame | 2555M17G33 | FCP5A43A | 51,481:03 | 5,402 | 0 | 5402 | —— | —— | —— | —— | |
| R561 | 72-56-00 | 10-390 | LPT Case | 2062M85G02 | FCP5A24G | 51,481:03 | 5,402 | 0 | 5402 | 24800 | 24800 | 19308 | 19308 | |
| S580 | 72-57-00 | 01-570 | Turbine Rear Frame | 2062M17G11 | FRZAC181 | 51,481:03 | 5,402 | 0 | 5402 | —— | —— | —— | —— | |

TSN:Time Since New

CSN:Cycle Since New

Production Control
Power Plant Production Management
Engineering Maintenance Center

K. Nakajima

Kohji Nakajima
Manager

ALL NIPPON AIRWAYS Co., Ltd.
JCAB Repair Station No.168
3-6-7, Haneda Airport,
Ota-ku, Tokyo, 144-0041, Japan

# Combination Statement

16th Jun, 2021

To Whom It May Concern:

**Subject: Combination Statement for Engine model GE90-115B serial number 9xxxxx**

This serves to confirm that during the maintenance and operation by All Nippon Airways Co., Ltd., the subject engine:

a) Has never experienced any abnormal occurrences and no operating limitations has been exceeded.
b) Was only serviced OIL with BP Turbo Oil 2197/Eastman Turbo Oil 2197, FUEL with Jet A-1/Jet A during their operation.
c) Was not operated using CIS Fuels and/or Fuel Additives.
d) No In-House Modifications were performed on this Engine or their installed QEC.

Engine status at time of end of operation by All Nippon Airways Co., LTD.:

| | | | |
|---|---|---|---|
| Engine Total Time: | 59,498:01 | Engine Time Since Shop Visit: | 7,958:26 |
| Engine Total Cycles: | 6,253 | Engine Cycle Since Shop Visit: | 949 |

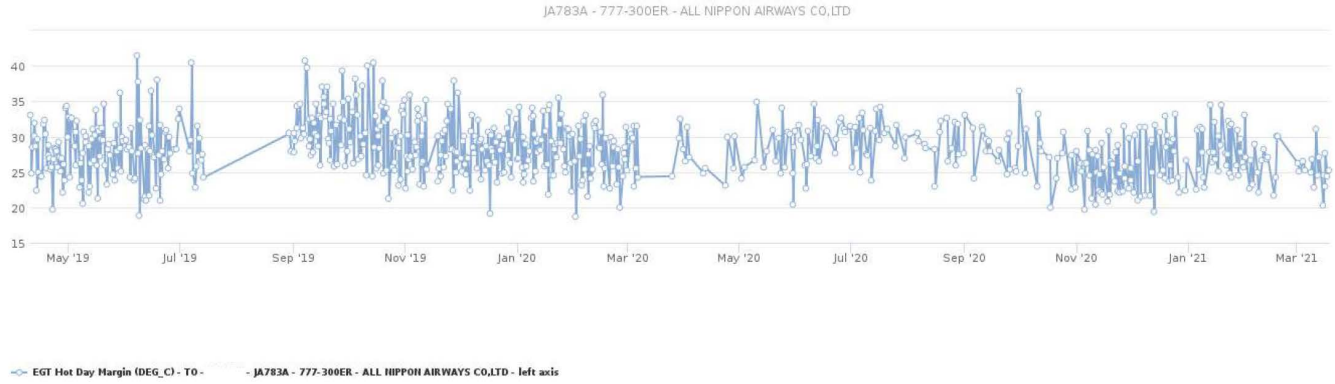
As of Date: 16th Jun, 2021

K. Nakajima

Production Control
Power Plant Production Management
Engineering Maintenance Center



Kohji Nakajima
Manager




Signature: D. Onzuka

Prepared by Daisuke Onzuka

Production Control
Power Plant Production Management
Engineering & Maintenance Center
All Nippon Airways Co., Ltd.

As of date: 19-Mar-2021

ALL NIPPON AIRWAYS Co., Ltd.
JCAB Repair Station No.168
3-6-7, Haneda Airport,
Ota-ku, Tokyo, 144-0041, Japan

# Accessory List

Engine Part Number GE90-115B
Engine Serial Number 9xxxxxx
Engine Total Time(hr:min) 59498:01
Engine Total Cycle 6253

as of 16-Jun-2021

| NO | NOMEN | PART NO | SERIAL NO | TSN(hr:min) | CSN | TSLSV(hr:min) | CSLSV |
|---|---|---|---|---|---|---|---|
| 1 | FWD MOUNT ASSY | GE91FWDM0UNT1 | 906-121 | 61772:00 | 6565 | 7958:26 | 949 |
| 2 | PLATFORM FWD MOUNT | 1846M30G01 | MMTF0995 | 61772:00 | 6565 | 7958:26 | 949 |
| 3 | LINK FWD MOUNT | 1691M19G03 | TEH002AP | 61772:00 | 6565 | 7958:26 | 949 |
| 4 | YOKE FWD MOUNT | 1846M31G01 | MMTF0981 | 61772:00 | 6565 | 7958:26 | 949 |
| 5 | LINK FWD MOUNT | 1691M19G03 | HAGH0292 | 61772:00 | 6565 | 7958:26 | 949 |
| 6 | ECU | 1962M67P05 | FFFA0012 | 59276:49 | 5988 | 15516:19 | 1648 |
| 7 | OIL TANK | 351-702-106-0 | YW241113-7 | 61772:00 | 6565 | 61772:00 | 6565 |
| 8 | DMS SEPARATOR | 1F8550 | YD025029-3 | 61772:00 | 6565 | 61772:00 | 6565 |
| 9 | SENSOR DMS | 1G2977-2 | YD000596-2 | 61772:00 | 6565 | 61772:00 | 6565 |
| 10 | SENSOR OIL LEVEL | 8TJ146CFB1 | YE015356G | 61772:00 | 6565 | 61772:00 | 6565 |
| 11 | CONT-CTAI | 810503-9 | 2407 | 47701:35 | 4890 | 6117:17 | 732 |
| 12 | SENSOR IP BLEED | 1151072-2 | 1151072-09083 | 12275:04 | 1342 | 12275:04 | 1342 |
| 13 | CONT-PRSOV | 3399102-30 | 1394 | 61608:56 | 6350 | 61608:56 | 6350 |
| 14 | CONTRLR-HPFAC | 3399100-31 | 212C | 65379:28 | 20316 | 36056:25 | 3690 |
| 15 | IDG_B7_GE/PW | 767146A | 1173 | 64756:42 | 12597 | 18683:00 | 1954 |
| 16 | HEAT EXCHANGER<B73E> | UA544011-1 | UDDH0126 | 51308:00 | 5333 | 16804:43 | 1890 |
| 17 | OIL COOLER | UA541463-4 | UDDL0475 | 59498:01 | 6253 | 46465:40 | 4965 |
| 18 | COOLER | UA541464-6 | UDDP0490 | 59498:01 | 6253 | 59498:01 | 6253 |
| 19 | VSCF GENE_B7 | 1701768 | 0580 | 58191:45 | 20921 | 8247:38 | 976 |
| 20 | EDP <B73&B72> | 66132-04 | 661322221 | 43198:45 | 4351 | 43198:45 | 4351 |
| 21 | IP CK VLV B73E | 3202804-1 | 1579 | 38129:16 | 3803 | 1011:56 | 151 |
| 22 | PRSOV/HPSOV | 3215302-4 | 1550A | 58418:37 | 21887 | 7958:26 | 949 |
| 23 | AFT MOUNT ASSY | GE91AFTM0UNT1 | | 59498:01 | 6253 | 59498:01 | 6253 |
| 24 | PLATFORM AFT MOUNT | 1846M33G02 | MMTG3690 | 25221:18 | 2682 | 7958:26 | 949 |
| 25 | LINK ATF MOUNT | 1846M36G01 | CDAAPJDK | 25221:18 | 2682 | 25221:18 | 2682 |
| 26 | LINK AFT MOUNT-R | 1846M35G01 | CDAAPMME | 25221:18 | 2682 | 7958:26 | 949 |
| 27 | LINK | 1846M37P01 | FEK041AT | 59498:01 | 6253 | 59498:01 | 6253 |
| 28 | TREE | 1846M34G01 | FEK867AE | 25221:18 | 2682 | 25221:18 | 2682 |
| 29 | LINK | 1846M29G03 | FBKRJ074 | 59498:01 | 6253 | 7958:26 | 949 |
| 30 | LINK | 1846M29G04 | FBKRK073 | 59498:01 | 6253 | 7958:26 | 949 |
| 31 | MAIN FUEL PUMP | 838000-2 | 8028 | 39799:32 | 4259 | 7958:26 | 949 |
| 32 | SENSOR F/F DELTA P | APT8A1500-120D | K20362 | 25361:12 | 2700 | 25361:12 | 2700 |
| 33 | FUEL MANI PRESS SNSR | APT151250-950A | KULG2008 | 59498:01 | 6253 | 59498:01 | 6253 |
| 34 | PT25 SENSOR | 0154GF12 | YA003223D | 38379:06 | 4024 | 31736:45 | 3350 |
| 35 | UNIT-HYD MECHANICAL | 8061-695 | 17931098 | 31345:12 | 3308 | 7958:26 | 949 |
| 36 | ALTERNATOR STATOR | 9049385-5 | GJA50992 | 51481:03 | 5492 | 7958:26 | 949 |
| 37 | ALTERNATOR ROTOR | 9049380-1 | GJA31361 | 59498:01 | 6253 | 59498:01 | 6253 |
| 38 | SENSOR T3 | 8TC58AAH1 | DTG5710 | 36441:43 | 3868 | 36441:43 | 3868 |
| 39 | FUEL FLOW METER | 8TJ124ERJ1 | GDB8429M | 59498:01 | 6253 | 36441:43 | 3868 |
| 40 | EXCITER | 10-631045-3 | UNLBH949 | 122:05 | 16 | 122:05 | 16 |
| 41 | EXCITER | 10-631045-3 | LJC346 | 3241:26 | 395 | 3241:26 | 395 |
| 42 | EDUCATOR VLV | 421775 | WCP0064R | 59498:01 | 6253 | 59498:01 | 6253 |
| 43 | LPTV <B73E> | 5010758-103 | PFBATH31 | 42594:33 | 4302 | 27955:13 | 2961 |
| 44 | CCC VALVE | 5010759-103 | PFBAPB18 | 51761:43 | 5359 | 25221:18 | 2682 |
| 45 | HPTCC VALVE | 5910500-106 | PFBAMS20 | 59107:42 | 6871 | 15596:42 | 1774 |
| 46 | VBV ACTUATOR | 880400-1005 | PFBANP32 | 59498:01 | 6253 | 59498:01 | 6253 |
| 47 | VBV ACTUATOR | 880400-1005 | PFBANP17 | 59498:01 | 6253 | 59498:01 | 6253 |
| 48 | ACTUATOR VSV | 351-704-801-0 | YM135121-0 | 54606:48 | 5721 | 25221:18 | 2682 |
| 49 | ACTUATOR VSV | 351-704-801-0 | YM135889 | 43041:47 | 4352 | 7224:12 | 859 |
| 50 | SENSO N1 | 330-005-702-0 | YJ383087-5 | 59498:01 | 6253 | 59498:01 | 6253 |
| 51 | SENSOR N2 | 320-802-402-0 | YJ005679-6 | 48476:13 | 5102 | 30221:33 | 3186 |
| 52 | EGT PROBE | 8TC34ABW1 | DTT6230 | 25221:18 | 2682 | 25221:18 | 2682 |
| 53 | EGT PROBE | 8TC34ABW1 | DTT6233 | 25221:18 | 2682 | 25221:18 | 2682 |
| 54 | EGT PROBE | 8TC34ABW1 | DTT6236 | 25221:18 | 2682 | 25221:18 | 2682 |
| 55 | EGT PROBE | 8TC34ABW1 | DTT6235 | 25221:18 | 2682 | 25221:18 | 2682 |
| 56 | EGT PROBE | 8TC34ABW1 | DTT6234 | 25221:18 | 2682 | 25221:18 | 2682 |
| 57 | EGT PROBE | 8TC34ABW1 | DTT6237 | 25221:18 | 2682 | 25221:18 | 2682 |
| 58 | EGT PROBE | 8TC34ABW1 | DTT6232 | 25221:18 | 2682 | 25221:18 | 2682 |
| 59 | EGT PROBE | 8TC34ABW1 | DTT6229 | 25221:18 | 2682 | 25221:18 | 2682 |
| 60 | NO1 BRG ACCMTR | 144-159-000-501 | VBRBR171 | 59498:01 | 6253 | 59498:01 | 6253 |
| 61 | TGF ACCELEMETER | 144-706-000-501 | VBRBT191 | 59498:01 | 6253 | 59498:01 | 6253 |
| 62 | F/O HEAT EXCHANGER | UA541461-14 | UDDC0709A | 49303:24 | 5112 | 7958:26 | 949 |
| 63 | PUMP L/S | 40F6021 | YT116379-0 | 53599:43 | 5722 | 7958:26 | 949 |
| 64 | ANTI LEAK VALVE | 40F0003 | YT040700-9 | 45896:50 | 4899 | 7958:26 | 949 |
| 65 | SENSOR OIL PRESS | APT7B1500-7BARD | YK001287V | 59498:01 | 6253 | 59498:01 | 6253 |
| 66 | STARTER<B73ER> | 3505830-13 | YG005797-8 | 43056:37 | 4373 | 227:46 | 26 |
| 67 | VLV STARTER<B73ER> | 3291677-2 | GRTS4628 | 43786:56 | 4588 | 37174:14 | 3948 |
| 68 | VLV-COWL TAI_B7 | 810502-3 | A9505000 | 39954:32 | 26445 | 6117:17 | 732 |
| 69 | COOLER CONT AY | 808650-5 | 2005030310 | 59498:01 | 6253 | 59498:01 | 6253 |
| 70 | FUEL FILTER ASSY | AEB999-30 | APFA9333 | 59498:01 | 6253 | 59498:01 | 6253 |
| 71 | SENSOR OIL PRESS | APT7B1500-7BARD | YK000806 | 59498:01 | 6253 | 59498:01 | 6253 |
| 72 | NOZZLE AY EXHAUST | 2204M24G02 | 06G06121 | 66457:35 | 7036 | 34878:48 | 3572 |
| 73 | CENTER BODY FWD | 2204M21G04 | 06G06121 | 61772:00 | 6565 | 61772:00 | 6565 |
| 74 | CENTER BODY ASSY-AFT | 2204M22G01 | 06G06217 | 57700:06 | 6284 | 20124:15 | 2068 |

【Remarks】
The marking "*" in the top of SERIAL NO means that "No piece parts exposed during ANA operation",
so this PART NO and SERIAL NO is temporally assigned.
TSN:Time Since New
CSN:Cycle Since New
TSLSV:Time Since Last Shop Visit
CSLSV:Cycle Since Last Shop Visit

K. Nakajima

Production Control
Power Plant Production Management
Engineering Maintenance Center



Kohji Nakajima
Manager

# ANA GE90-115B AIRWORTHINESS DIRECTIVES STATUS LIST (AD LIST)

Revision Date of this file: 16-Jun-2021
FAA AD Bi-Weekly: 2021-12
MSN / Registration No.: 27940 / JA783A

Engine Serial Number: 9xxxxx
Engine Total Time (hr:min): 59,498:01 (as of 16-Jun-2021)
Engine Total Cycles: 6,253 (as of 16-Jun-2021)
Manufactured Date: 07-Jun-2005

C : Close(Terminated) / O : Open / N : Not Applicable / S : Superseded

| TCD No. | FAA AD No. | Relevant Service Bulletin | Description | Status | Reccuring Inspection | Remarks |
|---|---|---|---|---|---|---|
| 6988-1-2009 | 2006-20-51 | GE90-100 SB 73-0021<br>GE90-100 SB 73-A0028 | Revising AFM to prohibit takeoffs at less than full-rated thrust | C | - | Completed<br>Installed P/N: 1962M67P05 |
| N/A | 2007-10-05 | Not Applicable | Removing certain TCFs from service before exceeding 14,300 flight cycles | N | - | N/A by Installed P/N : 2555M17G33 |
| 7626-2010 | 2009-25-14 | GE90-100 SB 72-0260<br>GE90-100 SB 72-0279<br>GE90-100 SB 72-0313 | Initial and repetitive inspections for shroud interlock wear of the stage 6 LPT blades | C | - | ANA PERFORMED TERMINATING ACTION SB72-0313 ON 15-APR-2010<br>(Installed LPT6 BLD P/N : 1765**M**69P02, 1765**M**65P07) |
| 7725-2010 | 2010-16-12 | 777-78A0070<br>GE90-100 SB 79-0017<br>GE90-100 SB 79-0019 | Replace insulation branket fasteners of the lower aft cowl of the thrust reverser and inspect/replace TRF oil scavenge tube | C | - | ▪ SB 79-0017 completed on 14-Mar-2008<br>▪ SB 79-0019 completed on 22-May-2009 |
| 8018-2012 | 2011-26-11 | GE90-100 SB 72-0320<br>GE90-100 SB 72-0360 | ECI or Spot FPI of the stage 1-2 Rotating Seal Teeth of the HPC Stages 2-5 Spool | C | - | ▪ SB 72-0320 Completed on 10-Dec-2014<br>▪ SB 72-0360 Completed on 17-Sep-2015<br>(Installed P/N : 351-103-110-0) |
| 8227-2013 | 2013-10-52 | See 2013-15-20 | Prohibits operation of an airplane with affected TGB radial gearshafts installed on any engine | S | - | Superseded by AD 2013-14-51 |
| 8227A-2013 | 2013-14-51 | See 2013-15-20 | Prohibits operation of an airplane with affected TGB radial gearshafts installed on any engine | S | - | Superseded by AD 2013-15-20 |
| 8227B-2014 | 2013-15-20 | GE90-100 SB 72-A0568<br>GE90-100 SB 72-0569<br>GE90-100 SB 72-0563 | Prohibits operation of an airplane with affected TGB radial gearshafts installed on any engine | C | - | Completed on 03-Dec-2015<br>Installed P/N : 2115M33G12 |
| 8311-2014 | 2013-17-07 | GE90-100 SB 72-0528 | Initial and Repetitive On-Wing Borescope Inspection(BSIs) for Corrosion and Oxidation, of the Affected Stage 1 HPT Stator Shrouds | N | - | N/A by Installed P/N : 1847M52P15 |
| 8334-2014 | 2013-23-18 | GE90-100 SB 73-0069 | Replacement of Variable Bypass Valve Actuator Fuel Supply Tube with a Part Eligible for Installation | C | - | Completed on 30-Dec-2013 |
| 8333-2014 | 2013-24-17 | See 2018-20-23 | Removing certain HPC rotor stage 2-5 spools from service | S | - | Superseded by AD 2017-07-04 |
| 8333A-2017 | 2017-07-04 | See 2018-20-23 | Removing certain HPC rotor stage 2-5 spools from service | S | - | Superseded by AD 2018-20-23 |

# ANA GE90-115B AIRWORTHINESS DIRECTIVES STATUS LIST (AD LIST)

Revision Date of this file: 16-Jun-2021
FAA AD Bi-Weekly: 2021-12
MSN / Registration No.: 27940 / JA783A

Engine Serial Number: 9xxxxx
Engine Total Time (hr:min): 59,498:01 (as of 16-Jun-2021)
Engine Total Cycles: 6,253 (as of 16-Jun-2021)
Manufactured Date: 07-Jun-2005

C : Close(Terminated) / O : Open / N : Not Applicable / S : Superseded

| TCD No. | FAA AD No. | Relevant Service Bulletin | Description | Status | Reccuring Inspection | Remarks |
|---|---|---|---|---|---|---|
| 8966-2017 | 2017-08-06 | GE90-100 SB 79-0034 | Replacing affected fuel/oil lube/servo coolers ("main fuel oil heat exchangers") | C | - | Completed on 02-Feb-2017<br>(Installed P/N :UA54161-14,<br>S/N : UDDC0709A) |
| 9191-2018 | 2018-20-22 | GE90-100 SB 72-0788<br>GE90-100 SB 72-0793<br>GE90-100 SB 72-0784 | Removal of affected Combustion Cases from Service | N | - | N/A by installed<br>P/N : 2082M19G01<br>S/N : GEVKTJ09 |
| 8333B-2018 | 2018-20-23 | GE90-100 SB 72-0499<br>GE90-100 SB 72-0659<br>GE90-100 SB 72-0714 | Removing certain HPC rotor stage 2-5 spools from service | O | Before Spool using 8,200 cycles | Installed<br>P/N : 351-103-110-0<br>S/N:PC160932 |
| 9383-2019 | 2019-21-51 | GE90-100 SB 72-A0826 | Removal from service of the GE90-115B model turbofan engine interstage seal, P/N 2505M72P01, from the affected engines | N | - | N/A by installed<br>P/N : 2505M72P01<br>S/N : GWN0TK6T |
| 9461-2020 | 2020-01-55 | GE90-100 SB 72-A0839 | Removal from service the interstage HPT rotor seal P/N 2505M72P01 or 2448M33P01 from the affected engines | N | - | N/A by installed<br>P/N : 2505M72P01<br>S/N : GWN0TK6T |
| 9571-2020 | 2020-10-04 | GE90-100 SB 72-A0841<br>GE90-100 SB 72-0830 | Initial and repetitive USI of the interstage HPT rotor seal / Replacement of the interstage HPT rotor seal | N | - | N/A by installed<br>P/N : 2505M72P01<br>S/N : GWN0TK6T |
| N/A | 2020-18-14 | GE90-100 SB 72-0838 | Ultrasonic inspection (USI) of the HPT rotor stage 2 disk | N | - | N/A by installed<br>P/N : 1865M14P04<br>S/N : TMT4RD67 |
| 9653-2020 | 2020-20-17 | GE90-100 SB 73-0117 | Revision of the existing FAA-approved MEL by incorporating the dispatch restrictions | O | Not Applicable | ANA added MEL Bulletin 20-5 referring SB 73-0117 checking procedure into B777 MEL73-21-04 on 31-Jul-2020. |
| 9656-2020 | 2020-21-13 | GE90-100 SB 72-0845 | Replacement of the affected HPT rotor stage 2 disks and rotating CDP HPT seals | N | - | N/A by Engine Serial Number |

**Engineering & Maintenance Center**
**Power Plant Production Management**
**Production Control**

Signature: K. Nakajima
Prepared by: Kohji Nakajima
Date: 16-Jun-2021