

NUMERICAL INDEX OF EFFECTIVE WORK PACKAGES/PAGES

List of Current Changes

Original 0.....31 December 1988
 Change 1..... 1 May 1993

Only those work packages assigned to the manual are listed in this index. Insert Change 1, dated 1 May 1993. Dispose of superseded and deleted work packages/pages. Superseded and deleted classified work packages/pages shall be destroyed in accordance with applicable regulations. If changed pages are issued to a work package, insert the changed pages in the applicable work package. The portion of text affected in a changed or revised work package is indicated by change bars or the change symbol R in the outer margin of each column of text. Changes to illustrations are indicated by pointing hands or change bars, as applicable. Total number of pages in this manual is 4364 consisting of the following:

WP/Page No.	Title	Change No.
A1-F402A-MMD-300 (VOLUME 1A)		
Title.....		1
Pages A thru H.....		1
J Blank		1
001 00	Alphabetical Index.....	1
002 00	Introduction	0
003 00	Alphanumerical Listing of Support Equipment.....	0
004 00	Materials Listing	0
005 00	Technical Directive (TD) and Engine Change Proposal (ECP) Listing.....	0
006 00	Description and Operation of Engine.....	0
007 00	General, Standard Practices.....	1
008 00	Cleaning, Standard Practices	0
009 00	Component Cleaning (Nontitanium), Standard Practices	0
009 01	Component Cleaning (Titanium), Standard Practices	0
009 02	Component Cleaning (Blades and Vanes), Standard Practices..	0
009 03	Component Cleaning (Nonstandard Coatings), Standard Practices	0
010 00	Inspection, Standard Practices	0
011 00	Repair, Standard Practices.....	1
012 00	Welding and Brazing, Standard Practices	0
013 00	Surface Coatings, Standard Practices.	0
013 01	Removal and Application of Sermetel W	0
013 02	Removal and Application of SermaSeal 570A	0
013 03	Removal and Application of Pack Aluminizing	0
013 04	Removal and Application of Dry-Film Lubricant.	0
013 05	Application of Chemical Conversion Coating	0
013 06	Removal and Application of Anodic Coating... .. .	0
013 07	Removal and Application of Organic coating... .. .	0
014 00	Thermal Spraying, Standard Practices.....	1

A1-F402A-MMD-300

Change 1 - 1 May 1993

Page B

WP/Page No	Title	Change No
A1-F402A-MMD-300 (VOLUME 1B)		
015 00	Plating, Standard Practices.. .. .	0
015 01	Removal and Application of Chromium Plating	0
015 02	Removal and Application of Silver Plating.. .. .	0
015 03	Removal and Application of Nickel Plating.	0
015 04	Removal and Application of Cadmium Plating	0
016 00	Maintenance Care Instructions and Inspection Requirements for Support Equipment	0
017 00	Repair of Support Equipment.....	1
018 00	Preparation for Service or Storage of Engine and Engine Assemblies	0
019 00	Engine Testing Procedures.....	0
020 00	Pre-Induction Inspection and Mandatory Maintenance Tasks	1
021 00	Disassembly of Engine	0
022 00	Disassembly, Cleaning, Inspection and Repair of LP Compressor Rotor Balanced Repairable Assemblies.....	1
022 01	Repair of Abradable Coating, LPC 2 Spacer.....	1
022 02	Repair by Installation of Oversize Fast End Headless Pin, LPC 1 Disk	0
022 03	Repair by Installation of Oversize Fast End Headless Pin, LPC 2 Disk	0
022 04	Removal and Application of Front Flange Antifret Coating, LP Compressor 2nd Stage Spacer.....	1
022 05	Corrosion Pitting Inspection and Repair Procedure, LP Compressor 2nd Stage Spacer.....	1
023 00	Cleaning, Inspection and Repair of LP Compressor Blades.	0
023 01	Reserved.	0
023 02	Reserved.	0
023 03	Reserved.	0
023 04	Removal and Application of Antifret Coating, LPC Blades.	0
024 00	Assembly and Balancing of LP Compressor Rotor Balanced Repairable Assemblies.....	1
025 00	Cleaning, Inspection and Repair of LP Compressor Ring Assemblies and Support Shroud	0
025 01	Reserved.	0
025 02	Reserved.	0
026 00	Cleaning, Inspection and Repair of LP Compressor Vanes.. .. .	0
026 01	Removal of Damage/Erosion by Blending... .. .	0
027 00	Disassembly, Cleaning, Inspection, Repair and Assembly of LP Compressor Case	0
027 01	Reserved.	0
027 02	Repair of Alignment of Bolt Locations, LPC Case	0
027 03	Repair by Installation of Oversize Inserts, LPC Case.	0
028 00	Disassembly, Cleaning, Inspection, Repair and Assembly of LP Support Cone Assembly and LP Compressor Front Hub Assembly	1
028 01	Repair by Installation of Oversize Fast End Locating Pins, LPC Front Hub.....	0
028 02	Repair by Application of Metal Spray, LP Support Cone.....	1
028 03	Repair by Installation of Oversize Headless Pins, LP Support Cone	1
029 00	Disassembly of Fan Assembly.. .. .	0
030 00	Cleaning, Inspection and Repair of Fan Assembly	0
030 01	Repair by Replacement of Alignment Pin, Fan Assembly	0
030 02	Repair of Gear by Restoration of Bearing Location, Fan Assembly... .. .	0
031 00	Assembly and Balancing of Fan Assembly	0

WP/Page No	Title	Change No
032 00	Disassembly of Accessory Gearbox	1
A1-F402A-MMD-310 (VOLUME 2)		
033 00	Cleaning, Inspection and Repair of Accessory Gearbox Repairable Assembly and Inner to Outer Drives.....	1
033 01	Restoration of Spur Gear B474147 Bearing Location	0
033 02	Restoration of Spur Gearshaft B455308 Bearing Location	0
033 03	Repair of LP Governor Drive Housing by Removal and Replacement of Bushings	0
033 04	Restoration of Spur Gear B497692 External Bearing Location.	0
033 05	Restoration of Spur Gear B497692 Internal Bearing Location	0
033 06	Repair of Front Gearbox Case by Restoration of Transfer Tube Bore	0
033 07	Repair of Front Gearbox Case by Restoration of Oil Tank Vent Tube Bore	0
033 08	Repair of Front Gearbox Case by Restoration of Oversize Fast End Hollow/Headless Pins... .. .	0
033 09	Repair of Front Gearbox Case by Restoration of Stud Locations	0
033 10	Repair of Rear Gearbox Case by Installation of Oversize Fast End Headless Pins	0
033 11	Repair of Front Gearbox Case by Installation of Solid Inserts	0
033 12	Reserved.	0
033 13	Repair of Accessory Gearbox Repairable Assembly by Removal and Application of Organic Coatings.	0
033 14	Repair of Accessory Gearbox Repairable Assembly by Removal and Installation of Screw Thread Inserts.	0
033 15	Repair of Accessory Gearbox Repairable Assembly by Removal and Application of Cadmium Plating.	0
034 00	Initial Assembly of Accessory Gearbox	1
035 00	Final Assembly of Accessory Gearbox	1
036 00	Disassembly of Intermediate Case Repairable Assembly (including Disassembly of HP Gearshaft Carrier Assembly).....	0
037 00	Cleaning, Inspection and Repair of Intermediate Case Repairable Assembly	1
037 01	Repair by Installation of Oversize Fast End Hollow/Headless Pins, Intermediate Case.....	1
037 02	Restoration of Alignment Bolt Locations, Intermediate Case.....	1
037 03	Repair by Chrome Plating, Intermediate Case (No. 2 Main Bearing Housing).....	0
037 04	Repair of HP Compressor Case Front Flange Alignment Pin Holes	1
037 05	Restoration of No. 2 Bearing Housing Front Face by Application of Metal Spray.....	1
037 06	Removal and Application of Tungsten Carbide Coating - IGV Outer Track Ring.....	1
038 00	Cleaning, Inspection and Repair of HP Gearshaft Carrier Assembly	0
038 01	Repair by Installation of Oversize Fast End Locating Pins, Zerol Bevel Gear Assembly. .. .	0
038 02	Restoration of Sealing Ring Location Bores, HP Gear Housing	0
038 03	Repair by Installation of Oversize Fast End Headless Pins, HP Gear Housing	0
039 00	Disassembly of LP Gearshaft Carrier Assembly	0
040 00	Cleaning, Inspection and Repair of LP Gearshaft Carrier Assembly..	0
040 01	Restoration of Sealing Ring Location, LP Gearshaft Carrier Assembly..	0

WP/Page No	Title	Change No
041 00	Assembly of LP Gearshaft Carrier Assembly	0
042 00	Cleaning, Inspection and Repair of Variable Inlet Guide Vanes	1
042 01	Repair by Restoration of Platform Location, Variable Inlet Guide Vanes	1
043 00	Disassembly, Cleaning, Inspection, Repair and Assembly of Valve Housing Assembly (VIGV control mechanism)	0
044 00	Assembly of Intermediate Case Repairable Assembly (including Installation of LP and HP Gearshaft Carrier Assemblies)	1
045 00	Cleaning, Inspection and Repair of LP Compressor Delivery Duct and Extension Duct. ..	0
045 01	Weld/Patch Repair, LP Compressor Delivery Duct	0
045 02	Restoration of Alignment Pin Holes, LP Compressor Delivery Duct	0
046 00	Disassembly, Cleaning, Inspection, Repair and Assembly of HP Compressor Case	0
046 01	Restoration of Lands between Vane Grooves, HP Compressor Case	0
046 02	Repair by Installation of Oversize Locating Pins, HP Compressor Case (Front)	0
046 03	Removal and Application of Abradable Coating, HP Compressor Rear Case..	0
046 04	Removal and Application of Antifret Coating, HP Compressor Rear Case	0
046 05	Restoration of 6th Stage Bleed Air Bores, Air Bleed Ducts..	0
047 00	Cleaning, Inspection and Repair of HP Compressor Vanes	0
047 01	Removal and Application of Tip Coating, HP Compressor Vanes	0
048 00	Disassembly of HP Compressor Rotor Balanced Repairable Assembly	0
049 00	Cleaning, Inspection and Repair of HP Compressor Front Hub, Rear Shaft, Disks, Spacers, Rear Seal and Miscellaneous Items	1
049 01	Repair by Installation of Oversize Fast End Headless Pins, HPC Spacers (Stages 2 to 7) ..	0
049 02	Repair by Installation of Oversize Fast End Headless Pins, HP Disks	0
049 03	Repair by Restoration of Bearing Location, Front Hub	0
049 04	Removal and Application of Abradable Coating, HPC Spacers	1
049 05	Machine Removal of Corrosion, HPC Rear Shaft.	0
049 06	Repair by Installation of Oversize Fast End Headless Pins, HPC Rear Shaft	0
050 00	Cleaning, Inspection and Repair of HP Compressor Blades	0
050 01	Blend Repair, HPC Blades	0
051 00	Assembly and One-Plane Balancing of HP Compressor Rotor Balanced Repairable Assembly	0
051 01	Tip-Grinding of HP Compressor Rotor Balanced Repairable Assembly.	0
051 02	Two-Plane Balancing of HP Compressor Rotor Balanced Repairable Assembly... ..	1

A1-F402A-MMD-320 (VOLUME 3)

052 00	Disassembly, Cleaning, Inspection, Repair and Assembly of HP Compressor Delivery Case.	0
052 01	Removal and Application of Antifret Coating, Support Ring... ..	0
052 02	Removal and Application of Antifret Coating, HP Compressor Delivery Case.....	0
052 03	Removal and Application of Flame Sprayed Coating, HP Compressor Delivery Case	0
053 00	Disassembly, Cleaning, Inspection, Repair and Assembly of Engine Mounting Trunnions. 0	
053 01	Repair by Installation of Oversize Fast End Headless Pins, Mounting Trunnions.	0
053 02	Repair by Installation of Nonregular Spherical Bearing, LH Mounting Trunnion	0
054 00	Disassembly, Cleaning, Inspection, Repair and Assembly of Bulkhead Assembly.	0

WP/Page No	Title	Change No
055 00	Disassembly, Cleaning, Inspection, Repair and Assembly of Turbine Case Assembly and Support Ring... .. 0	0
055 01	Repair by Installation of Oversize Fast End Headless Pins, Turbine Case 0	0
055 02	Local Restoration of Flame Sprayed Coating, Turbine Case 0	0
055 03	Removal and Application of Flame sprayed Coatings, Turbine Case. 0	0
055 04	Removal and Application of Flame Sprayed Coating, Support Ring. 0	0
056 00	Cleaning, Inspection and Repair of Combustion Chamber Case 0	0
056 01	Weld Repair of Cracks, Combustion Chamber (Assembled) 0	0
056 02	Weld Repair of Cracks, Combustion Chamber (Cut Open) 0	0
056 03	Patch Repair of Front Plate, Combustion Chamber... .. 0	0
056 04	Repair by Replacement of Damaged Sections, Combustion Chamber 0	0
056 05	Repair of Replacement of HP Turbine 1st Stage Nozzle Vanes, Combustion Chamber 0	0
057 00	Cleaning, Inspection and Repair of Combustion Chamber Inner Case and Seal Housing..... 1	1
057 01	Repair by Replacement of Damaged Vanes, CCIC..... 1	1
057 02	Weld Repair of Cracks, CCIC 1	1
057 03	Removal and Application of Locating Flange Hard Face Coating, Combustion Chamber Inner Case (CCIC) 1	1
057 04	Removal and Application of Locating Lug Hard Face Coating, Combustion Chamber Inner Case (CCIC)..... 1	1
057 05	Patch Repair of Damaged Areas, Combustion Chamber Inner Case (CCIC)..... 1	1
058 00	Disassembly, Cleaning, Inspection, Repair and Assembly of Nozzle Support Cone 0	0
058 01	Reserved. 0	0
058 02	Reserved. 0	0
058 03	Repair of Nozzle Support Cone by Removal and Application of Antifret Coating 0	0
059 00	Disassembly of HP Turbine 1st Stage Rotor Balanced Repairable Assembly 0	0
060 00	Disassembly of HP Turbine 2nd Stage Rotor Balanced Repairable Assembly..... 1	1
061 00	Cleaning, Inspection and Repair of HP Turbine 2nd Stage Disk, Seal Rings, Air Flow Disk, Coupling Rings and Miscellaneous Items 0	0
061 01	Repair by Removal of Fretting, Air flow Disk.. 0	0
061 02	Repair by Removal of Fretting, from Front Face of Disk, HPT1 Disk 0	0
062 00	Cleaning, Inspection and Repair of HP Turbine 2nd Stage Disk, HP Drive Hub, Oil Transfer Duct and HP Disk Heatshield 1	1
063 00	Cleaning, Inspection and Repair of HP Turbine Blades..... 1	1
063 01	Blend Repair, HPT1 Blades..... 1	1
063 02	Blend Repair, HPT2 Blades..... 0	0
063 03	Repair by Flame Plating of Shroud Abutment Faces, HPT2 Blades 1	1
063 04	Restoration of Shroud Abutment Faces and Application of Cocraly Coating..... 1	1
064 00	Assembly and Two-Plane Balancing of HP Turbine 1st Stage Rotor Balanced Repairable Assembly .. 1	1
064 01	Assembly and One-Plane Balancing (Troubleshooting Procedure) of HP Turbine 1st Stage Rotor Balanced Repairable Assembly..... 0	0
065 00	Assembly and One-Plane Balancing of HP Turbine 2nd Stage Rotor Balanced Repairable Assembly .. 1	1
065 01	Assembly and Two-Plane Balancing of HP Turbine 2nd Stage Rotor Balanced Repairable Assembly 1	1
066 00	Disassembly of HP Turbine 2nd Stage Static Repairable Assembly 0	0
067 00	Cleaning, Inspection and Repair of HP Turbine 2nd Stage Front Nozzle Disk and Rear Nozzle Support Disk, Seal Housings and Miscellaneous Items 0	0

WP/Page No	Title	Change No
067 01	Reserved.	0
067 02	Reserved.	0
068 00	Cleaning, Inspection and Repair of HP Turbine 2nd Stage Vanes.	0
068 01	Restoration of Front Foot Radius, HPT2 Vanes... ..	0
068 02	Repair by Replacement of Vane Liner, HPT2 Vanes..	0
068 03	Weld Repair of Cracks, HPT2 Vanes.	0
068 04	Removal and Application of Pack Aluminizing, HPT2 Vanes.....	1
068 05	Removal and Application of Abradable Coating, HPT2 Vanes.....	1
069 00	Assembly of HP Turbine 2nd Stage Static Repairable Assembly	0

A1-F402A-MMD-330 (VOLUME 4)

070 00	Disassembly, Cleaning, Inspection and Repair of LP Turbine 1st Stage Rotor Balanced Repairable Assembly... ..	1
070 01	Restoration of Labyrinth Seal Fins by Roll Forming, LPT1 Rotor Disk.	0
070 02	Restoration of Labyrinth Seal Fins by Roll Forming, LPT Rotor Hub... ..	0
071 00	Disassembly, Cleaning, Inspection and Repair of LP Turbine 2nd Stage Rotor Balanced Repairable Assembly... ..	1
071 01	Restoration of Labyrinth Seal Fins by Roll Forming, LPT2 Rotor Disk.	0
072 00	Cleaning, Inspection and Repair of LP Turbine Blades... ..	1
072 01	Removal and Replacement of Pack Aluminizing, LPT1 Blades	1
072 02	Removal and Replacement of Pack Aluminizing, LPT2 Blades	1
072 03	Finish Blending of Leading/Trailing Edge to Remove Impact Damage or Corrosion, LPT1 Blades	0
072 04	Finish Blending of Leading/Trailing Edge to Remove Impact Damage, LPT2 Blades... ..	0
072 05	Reserved.	0
072 06	Reserved.	0
072 07	Restoration of Worn Shroud Abutment Faces, LPT1 Blades	0
072 08	Restoration of Worn Shroud Abutment Faces, LPT2 Blades	0
073 00	Assembly and Balancing of LP Turbine 1st Stage Rotor Balanced Repairable Assembly ..	1
074 00	Assembly and Balancing of LP Turbine 2nd Stage Rotor Balanced Repairable Assembly ..	1
075 00	Disassembly of LP Turbine 1st Stage Seal Diaphragm and Vanes	0
076 00	Cleaning, Inspection and Repair of LP Turbine 1st Stage Seal Diaphragm, LP 2nd Stage Seal Housing and Miscellaneous Items..	0
076 01	Removal and Application of Antifret Coating, LP 1st Stage Seal Diaphragm ..	0
076 02	Removal and Application of Antifret Coating, LP 2nd Stage Seal Housing.	0
076 03	Reserved.	0
076 04	Reserved.	0
077 00	Cleaning, Inspection and Repair of LP Turbine Vanes	0
077 01	Repair of Cracks by Welding/Brazing, LPT2 Vanes... ..	0
078 00	Assembly of LP Turbine 1st Stage Seal Diaphragm and Vanes.	0
079 00	Disassembly of LP Compressor Drive Shaft Assembly	0
080 00	Cleaning, Inspection and Repair of LP Compressor Drive Shaft Assembly	0
080 01	Restoration of No 4 Main Bearing Location, LP Drive Shaft... ..	0

WP/Page No	Title	Change No
081 00	Assembly and One-Plane Balancing of LP Compressor Drive Shaft Assembly	0
081 01	Assembly and Two-Plane Balancing of LP Rotor System	1
082 00	Disassembly, Cleaning, Inspection, Repair and Assembly of Exhaust Diffuser Assembly and Insulation Shield...	1
082 01	Repair by Installation of Oversize Fast End Headless Pins, Exhaust Diffuser Assembly . . .	0
082 02	Weld/Patch Repair, Exhaust Diffuser Assembly	0
082 03	Weld Repair of Cracks, Radiation Shield	0
082 04	Weld Repair of Cracks, Insulation Shield	0
082 05	Weld Repair of Cracks, Oil Drain Tank and Bearing Housing Assembly.....	1
083 00	Disassembly, Cleaning, Inspection and Repair of Combustion Chamber Inner Case and Seal Housing	0
083 01	Repair by Restoration of Tapped Holes, Exhaust Duct	0
083 02	Repair by Replacement of Manifold, Exhaust Duct...	0
083 03	Weld Repair of Cracks in Bracket/Box Section Weld Line, Exhaust Duct	0
084 00	Cleaning, Inspection and Repair of Intermediate Ducts.. . . .	0
084 01	Repair of Union Bodies - Intermediate Ducts...	0
085 00	Disassembly, Cleaning, Inspection, Repair and Assembly of Front and Rear Outer Bearing Ring Assemblies...	1
085 01	Repair by Replacement of Missing/Defective Studs, Outer Bearing Ring Assembly...	0
085 02	Repair by Installation of Oversize Fast End Headless Pins, Outer Bearing Ring Assembly	0
086 00	Reserved.	0
087 00	Cleaning, Inspection and Repair of LP Exhaust and Turbine Exhaust Rotating Nozzles . . .	0
087 01	Weld Repair of Cracks, Turbine Exhaust Rotating Nozzles	0
087 02	Patch Repair of Cracks, Turbine Exhaust Rotating Nozzles	0
087 03	Repair by Replacement of Outboard Vane, Turbine Exhaust Rotating Nozzles	0
088 00	Reserved.	0
089 00	Disassembly of Oil Pumps Repairable Assembly...	0
090 00	Cleaning, Inspection and Repair of Oil Pumps Repairable Assembly.	0
090 01	Repair of Bores by Installation of Liners, Oil Pumps	0
090 02	Repair of Bores by Installation of Bearing Sleeves with Locking Plug Positions, Oil Pumps.	0
090 03	Repair by Restoration of Stud Locations, Oil Pumps.	0
090 04	Repair by Installation of Oversize Fast End Headless Pins, Oil Pumps	0
091 00	Assembly of Oil Pumps Repairable Assembly	0
092 00	Disassembly, Cleaning, Inspection, Repair and Assembly of Oil Tank	0
092 01	Weld Repair of Cracks, Oil Tank	0
092 02	Weld Repair of Fretting, Oil Tank	0
093 00	Reserved.	0
094 00	Disassembly of Oil Cooler	0
095 00	Cleaning, Inspection and Repair of Oil Cooler	0
096 00	Assembly and Testing of Oil Cooler...	0
097 00	Disassembly, Cleaning, Inspection, Repair and Assembly of Variable Inlet Guide Vane (VIGV) Position Transmitter	0
098 00	Reserved.	0
099 00	Cleaning, Inspection, Repair and Testing of Air/Oil/Fuel/Water Hoses and Tubes	0