

INVITATION TO BID

Tender Ref: GMCM/GE-90/Repair & Overhaul/01/2024

Pakistan International Airline (PIA) invites quotations through EPADS and sealed bids from renowned (Eligibility as per Bidding Documents) Vendors on “Single Stage Two Envelope Basis” for

“Repair & Overhaul of GE90 Series Engines installed on PIACL B777 Fleet”.

Bidding documents containing detail terms and conditions, etc. are available electronically and can be downloaded from

PIACL Website <https://www.piac.com.pk/corporate/sales- procurement/tenders>

PPRA Website <https://www.ppra.org.pk/active-tenders>

EPADS-PPRA website <https://www.eprocure.gov.pk> through Supplier Login

Bids should be submitted electronically through EPADS.

The bids must be prepared in accordance with the instruction in the bidding documents and must be submitted by **01-07-2024** on/before 10:30 AM. Bids will be opened on the same day at 11:00 AM.

Hard Copies of bids along with Original Bid Security instrument MUST BE submitted to the under signed before above given deadline.

Pakistan International Airlines

GM Contract Management Division

1st Floor, Supply Chain Management Department Building, [PIACL], Head

Office Karachi Airport-75200 Pakistan

Tel: +92-21-99044216 / 5277

E - mail. gm.cm@piac.aero / contract.tech@piac.aero

Website: <http://web.piac.com.pk/>

IMPORTANT NOTES

Bidding documents, containing detailed terms and conditions, etc. are available and can be downloaded from PIA Website <https://www.piac.com.pk/corporate/sales-procurement/tender> as well as from E-PADS PPRA web site www.eprocure.gov.pk free of cost. Bidders need to get registered at E-web portal of E-PADS PPRA (**Federal**) to access the tender document and other relevant information including electronic bid submission. In case of any help regarding EPADS online submission Mr. Wali Sohaib Najeeb Cell No. +92 345 9897000 and email auditcell.scm@piac.aero and contract.tech@piac.aero may be contacted.

Bids should be submitted electronically ONLY through EPADS PPRA web portal. Manual submission of bid, without EPADS electronic bid is NOT acceptable. For registration and training on EPADS or in case of any technical difficulty in using EPADS, prospective bidder/s may contact Mr. Rizwan Mehmood, Director MIS Room No.109, 1st Floor, FBC Building Sector G-5/2, Islamabad or Helpline Contact No. 051-111-137-237.

The bids prepared in accordance with the instructions in the bidding documents must be submitted through EPADS web portal by closing time & date mentioned in the tender document. Bids will be opened on the same day at 11:00 AM through EPADS. All interested bidders must register themselves at EPADS by using link: <https://eprocure.gov.pk/#/supplier/registration> Original Bid Security and Tender Fee instrument MUST BE attached with the Technical Proposal and the reference / PayOrder copy must be submitted through EPADS online submission as well, before Tender Closing Date & Time (For Local Bidders only).

Note for International Bidders

International Suppliers/Vendors/Bidders are requested to register on EPADS if for assistance to get registered contact PIA Focal EPADS Mr. Wali Sohaib Najeeb Cell No. +92 345 9897000 and email auditcell.scm@piac.aero and contract.tech@piac.aero.

In the event that Foreign bidders are unable to register on an EPAD, manual bids (subject to company management approval) may be submitted; but, in compliance with PPRA instructions, all bidders, whether local and foreign, must subsequently register on EPADS.

For Manual submission (without EPADS) either hard copies or electronic copies can be submitted on the following addresses.

For Electronics Bids Submission:

Electronic Bids must be password protected and password of the bids is requested to be sent 30 minutes on or before the tender closing time that is 10:30 AM (Pakistan Standard time) on the email: dgmppm@piac.aero . Electronics Bids submission intimation should be sent on email: contract.tech@piac.aero .

For Bids (Hard Copies) Submission:

GM Contract Management
Supply Chain Management
PIA Head Office, Karachi
Tel: 021 – 9904 4216, 9904 5277
Email: gm.cm@piac.aero
contract.tech@piac.aero

Tender for
Repair / Overhaul of GE90 Series Engines
installed on PIACL B777 Fleet

Section A - Instructions to Bidders

1. Scope of Tender

Pakistan International Airlines Corporation Limited (PIACL) invites “sealed proposals” from interested parties for the “Repair & Overhaul of GE90 Series Engines installed on PIACL B777 Fleet”. The services must include following,

- Complete Repair / Overhaul of GE90 Series Engine with upto date MOD status. (i.e. incorporation of all applicable ADs, Mandatory / Recommended SB’s)
- Quick turn Repair
- On-site Quick Turn Repair by On-wing Support Option
- Availability of Loaner engine to support operations of Aircraft
- Bidder can bid for **one or both** Engines repair

2. Mandatory Requirements

S/N	Mandatory Requirements	YES/NO
1.	Must have in-house Repair / Overhaul Capability of GE90 Series Engines	
2.	Experience of GE90 Series Engine Overhaul in Last 03 Years	
3.	PIA requires any of the following certification for repaired / overhauled Engines. <ul style="list-style-type: none"> • EASA Form-1 • FAA Form 8130 • TCA Form 24-0078 	
4.	The Service Provider must get their facility audited and approved by Pakistan Civil Aviation Authority (PCAA 145)	
5.	PMA parts and DER repairs (With Customers Consent Only)	

- Offer **MUST** contain the above table duly filled to consider the proposal.

Section B – Evaluation of Proposals

Note: *Proposals **must** contain the criteria table with offer mentioned against each field.*

1. Technical Evaluation Criteria for ESN: 906-442

Following Criteria will be used for Evaluation:

S/N	Criteria	Unit	Weightage	Bidders Offer
1	Turnaround time in days.	Number	10	
2	Maximum excusable days in TAT	Number	4	
3	Minimum Non-Excusable Days in TAT	Number	4	
4	Loaner Engine offer in case of extension of offered TAT (whether Excusable and/or Non-Excusable Days) with discounted Daily Rental	Agree / Not Agree	10	
5	Warranty Terms			
	a) On-wing life (Days)	Calendar Days	05	
	b) On-wing Life (Minimum 3000 FC)	Flight Cycles	05	
6	In case of engine failure within warranty period, it is mandatory to provide FOC loaner, repair and transportation both ways by the service provider	Agree / Not Agree	05	
7	Sharing in Transportation Charges to & from PIA base	100% Transportation will get full marks(10)	10	
		50% Transportation will get 5 marks		
8	Management of Engine Transportation	Agree /Not Agree	06	
9	On-site Quick Turn Repair by On-wing Support Team	Agree /Not Agree	05	
10	Availability of Induction Slot within 20 days after receipt of repair order from PIA	Agree / Not Agree	6	
11	Arrangement of PIA representatives for table inspection (Transportation ,boarding, lodging etc)	Agree / Not Agree	6	
	TOTAL		75	

Marks will be calculated as per following formula:

Obtained Marks (A) = (Best Offer / Service Provider's offer) x weightage

2. Financial Evaluation Criteria for ESN: 906442

S/N	Criteria	Units	Weightage	Fill Here
1.	Not To Exceed Price for workscope and points given in Annex-A and Annex-B (Including test & fuel charges)	USD	80	
2.	All Modules Fix Labour Charges (in case of workscope escalation or reduction)	USD	15	Annex-C
3.	Non Routine (Out of workscope) Labor Rate	USD	02	
Replacement Parts				
4.	a) Used Serviceable Parts (LLPs)	% Pro-rate	03	
	b) Used Serviceable Parts (Non-LLPs)	% CLP	03	
	c) Rotable Exchange	% CLP	03	
	d) Component Repair	% CLP	03	
	e) Accessory & QEC Repairs	% CLP	03	
Standard Exchange Charges (% CLP)				
5.	a) For Used Serviceable Non-LLP's	% CLP	02	
Handling Fee Type				
6.	a) New Parts (Non-LLP)	% CLP	01	
	b) New Parts (LLP)	% CLP	01	
	c) Rotable Exchange	% CLP	01	
	d) Customer Furnished Equipment / Parts	% CLP	01	
	e) Used Serviceable LLP Parts	% OF INVOICE	01	
	f) Used Serviceable Non-LLP Parts	% OF INVOICE	01	
	g) Sub-contracted Services	%OF INVOICE	01	
Capping on Handling Charges				
7.	a) New Parts per Item and per Line Item	USD	01	
	b) New LLP Parts	USD	01	
	c) New Non-LLP Parts	USD	01	
	d) Used Serviceable Parts (LLPs)	USD	01	

Bidding Document For Repair & Overhaul of GE90 Series Engines

	e) Used Serviceable Parts (Non-LLPs)	USD	01	
	f) Sub-Contracted work	USD	01	
	g) Sub-contracted Work per Item and per Line Item	USD	01	
	Payment Terms			
8.	a) Initial Payment at Induction (20% of NTE Cost)	% Invoice	05	
	b) 30% of NTE cost after Table Inspection	% Invoice	05	
	c) 50% of NTE cost after testing		05	
	d) Remaining Invoice after Delivery of engine within 30 days	Yes / No	05	
9.	Penalty per day in case of extended TAT	USD	02	
Total			150	

All financial offers must be in USD.

Marks will be calculated as per following formula:

Formula for all Dollar Value Points is **Obtained Marks = (Highest Offer / Bid Offer) x Weightage**

For remaining points **Obtained Marks = (Best Offer / Bidder's Offer) x weightage**

Total Marks Obtained = (40% x Marks obtained in Technical Evaluation) + (60% x Marks obtained in Technical Evaluation)

Section B – Evaluation of Proposals

Note: *Proposals must contain the criteria table with offer mentioned against each field.*

1. Technical Evaluation Criteria for ESN: 906-151

Following Criteria will be used for Evaluation:

S/N	Criteria	Unit	Weightage	Bidders Offer
1	Turnaround time in days.	Number	10	
2	Maximum excusable days in TAT	Number	4	
3	Minimum Non-Excusable Days in TAT	Number	4	
4	Loaner Engine offer in case of extension of offered TAT (whether Excusable and/or Non-Excusable Days) with discounted Daily Rental	Agree / Not Agree	10	
5	Warranty Terms			
	c) On-wing life (Days)	Calendar Days	05	
	d) On-wing Life (Minimum 3000 FC)	Flight Cycles	05	
6	In case of engine failure within warranty period, it is mandatory to provide FOC loaner, repair and transportation both ways by the service provider	Agree / Not Agree	05	
7	Sharing in Transportation Charges to & from PIA base	100% Transportation will get full marks(10)	10	
		50% Transportation will get 5 marks		
8	Management of Engine Transportation	Agree /Not Agree	06	
9	On-site Quick Turn Repair by On-wing Support Team	Agree /Not Agree	05	
10	Availability of Induction Slot within 20 days after receipt of repair order from PIA	Agree / Not Agree	6	
11	Arrangement of PIA representatives visit (3pax/engine shop visit) (Hotel Accommodation, Meals & Transportation to & from facility)	Agree / Not Agree	6	
	TOTAL		75	

Marks will be calculated as per following formula:

Obtained Marks (A) = (Best Offer / Service Provider's offer) x weightage

2. Financial Evaluation Criteria for ESN: 906151

S/N	Criteria	Units	Weightage	Fill Here
1.	Not To Exceed Price for workscope and points given in Annex-A and Annex-B (Including test & fuel charges)	USD	80	
2.	All Modules Fix Labour Charges (in case of workscope escalation or reduction)	USD	15	Annex-C
3.	Non Routine (Out of workscope) Labor Rate	USD	02	
Replacement Parts				
4.	f) Used Serviceable Parts (LLPs)	% Pro-rate	03	
	g) Used Serviceable Parts (Non-LLPs)	% CLP	03	
	h) Rotable Exchange	% CLP	03	
	i) Component Repair	% CLP	03	
	j) Accessory & QEC Repairs	% CLP	03	
Standard Exchange Charges (% CLP)				
5.	b) For Used Serviceable Non-LLP's	% CLP	02	
Handling Fee Type				
6.	h) New Parts (Non-LLP)	% CLP	01	
	i) New Parts (LLP)	% CLP	01	
	j) Rotable Exchange	% CLP	01	
	k) Customer Furnished Equipment / Parts	% CLP	01	
	l) Used Serviceable LLP Parts	% OF INVOICE	01	
	m) Used Serviceable Non-LLP Parts	% OF INVOICE	01	
	n) Sub-contracted Services	%OF INVOICE	01	
Capping on Handling Charges				
7.	h) New Parts per Item and per Line Item	USD	01	
	i) New LLP Parts	USD	01	

Bidding Document For Repair & Overhaul of GE90 Series Engines

	j) New Non-LLP Parts	USD	01	
	k) Used Serviceable Parts (LLPs)	USD	01	
	l) Used Serviceable Parts (Non-LLPs)	USD	01	
	m) Sub-Contracted work	USD	01	
	n) Sub-contracted Work per Item and per Line Item	USD	01	
	Payment Terms			
	e) Initial Payment at Induction (20% of NTE Cost)	% Invoice	05	
8.	f) 30% of NTE cost after Table Inspection	% Invoice	05	
	g) 50% of NTE cost after testing		05	
	h) Remaining Invoice after Delivery of engine within 30 days	Yes / No	05	
9.	Penalty per day in case of extended TAT	USD	02	
Total			150	

All financial offers must be in USD.

Marks will be calculated as per following formula:

Formula for all Dollar Value Points is **Obtained Marks = (Highest Offer / Bid Offer) x Weightage**

For remaining points **Obtained Marks = (Best Offer / Bidder's Offer) x weightage**

Total Marks Obtained = (40% x Marks obtained in Technical Evaluation) + (60% x Marks obtained in Technical Evaluation)

Annex-“A”

“Not to Exceed points” base price **“MUST INCLUDE”** following:

1. Preparation for testing and Engine Testing Charges (exclusive of Fuel & Oil)
2. Engine receiving inspections including BSI and inventory checks.
3. Detailed outgoing inspection with preparation for shipment.
4. All required labor (routine and non -routine work and repairs).
5. Consumable and expendable Material
6. Replacement of hardware will be preferable with used serviceable/overhauled in case original part is repairable or scrapped.
7. Exchange/Pool Material
8. Replacement of all type of Hardware (Including Non LLPs, each blade & Vane etc) scrapped part irrespective of their cost related for all level of workscopes i.L1, L2 , L3 &L4
9. Replacement of HPT S1 /2 Blades will be New/Overhauled with TSO/CSO 00/00

Last shop visit documents of these two engines are available in Google drive link below.

ESN: 906-442 LAST SHOP VISIT

<https://drive.google.com/drive/folders/1jn1O2wvD8Qko0woIHd0-seIcLy-IQ-5G?usp=sharing>
WORK SCOPE/LLPs (906-442).

ESN: 906-151 LAST SHOP VISIT

https://drive.google.com/drive/folders/1utJ_Ooy1Fho6b8zdwpe0SxowDQWUUpq?usp=sharing

WORK SCOPE/LLPs (906-151).

Annex "B"

WORKSCOPE

Annex "B" (ESN 906-442)

GE90 ENGINE WORKSCOPE DATA	
ESN	906-442
ENGINE TYPE	GE115
Aircraft	BHV
Position	1
Reason of Removal	T/X LLP
Date of Removal	03-04-24
ECSN	8200
ETSN	51927
CSLSV	4100
TSLSV	26493
CSO (HOT SECTION)	4100
TSO (HOT SECTION)	26493

S/N	ESN	MOD (CODE)	NOMENCLATURE	Workscope Required	Remarks
1	906-442	(21X/A)M21	FAN BOOSTER ASSY	LEVEL 4	
2	906-442	(22X/B)M23	NO.1-2 BRG/ASSY	LEVEL 2	
3	906-442	(61X/U)M32	IGB	LEVEL 2	
4	906-442	(62X/V)M33	TGB	LEVEL 4	
5	906-442	(31X/E)M51	HPC ROTOR	LEVEL 4	
6	906-442	(32X/F)M52	HPC STATOR	LEVEL 4	
7	906-442	(41X/F)M45	Combustor Diffuser	LEVEL 3	
8	906-442	(410)M54	COMBUSTOR	LEVEL 3	
9	906-442	(51X/T)M55	ST1 NOZZLE	LEVEL 4	
10	906-442	(52X/L)M56	ST2 NOZZLE	LEVEL 4	
11	906-442	(53X/M)M57	HPT ROTOR	LEVEL 4	
12	906-442	(54X/N)M58	TCF ASSY	LEVEL 4	
13	906-442	(56X/T)M61	LPT ROTOR/STATOR	LEVEL 4	
14	906-442	(57X/S)M63	TRF ASSY	LEVEL 2	
15	906-442	(58X/T)M64	LPT MID-SHAFT	LEVEL 2	
16	906-442	(64X/W)M71	AGB ASSY	LEVEL 3	

NOTES:

- 1 Engine to be built for LLP stub life of HPT Stator Case with minimum life of 4800 cycles.
- 2 All open ADs to be complied.
- 3 Consult engine last shop visit document for details of work done during the visit on each module.
- 4 Re work LLPs if applicable for enhancement of their life subject to extent of disassembly of module.
- 5 All accessories to be repaired as per GE90-100 Engine WSPG
- 6 Used LLPs to be installed for replacement to match engine build life.

Important SBs:

In additions to other Mandatory/Recommended SBs, comply the following SBs in case of applicability.
72-0676, 80-0031, 72-0686,80-0016



**Technical Services Engineering
Power Plant Overhaul Division
PIA Engineering & Maintenance
ENGINES LLP STATUS**

ESN	S/N	Eng. Type	CURRENT ENGINE TSN	CURRENT ENGINE CSN	Nomenclature	PART NO.	PART SR NO.	PARTTSN CURRENT	PART CSN CURRENT	CYCLES LIMIT	CYCLES REMAIN
906-442	1	GE90-100	51927	8200	DISK, STG 1 FAN	2032M68G02	GWN0GKF1	51927	8200	15000	6800
	2	GE90-100	51927	8200	SPOOL, BOOSTER	351-200-006-0	BD020185	51927	8200	15000	6800
	3	GE90-100	51927	8200	SHAFT, FAN FWD	2209M10G02	IHIDL403	51927	8200	15000	6800
	4	GE90-100	51927	8200	CASE, EXTENSION HPC	351-100-111-0	DE165928	51927	8200	14000	5800
	5	GE90-100	51927	8200	BLISK, STG1 HPC	351-101-011-0	BC998917	51927	8200	15000	6800
	6	GE90-100	51927	8200	SHAFT, CONE HPC	351-102-906-0	DE038183	51927	8200	15000	6800
	7	GE90-100	51927	8200	SPOOL, STG 2-5 HPC *	351-103-146-0	PA102564	51927	8200	8200	0
	8	GE90-100	51927	8200	DISK, STG 6 HPC	351-100-904-0	PA023045	51927	8200	11500	3300
	9	GE90-100	51927	8200	SPOOL, STG 7-9 HPC	2032M23G01	GWN0GMFM	51927	8200	11800	3600
	10	GE90-100	51927	8200	RING, TUBE SUPPORTER	351-101-103-0	DD201617	51927	8200	15000	6800
	11	GE90-100	51927	8200	SEAL, CDP ROTATING	2012M71P02	GEE1G5D5	51927	8200	15000	6800
	12	GE90-100	51927	8200	CASE, FWD HPC	351-104-011-0	DE165915	51927	8200	25380	17180
	13	GE90-100	51927	8200	CASE, COMBUSTOR	2082M19G04	GEVKWALE	51927	8200	18400	10200
	14	GE90-100	51927	8200	CASE, STATOR HPT	2082M18G02	FCP59W44	51927	8200	13000	4800
	15	GE90-100	51927	8200	SEAL, AFT HPT	1865M17P02	XAE83302	51927	8200	15000	6800
	16	GE90-100	51927	8200	DISK, STG 2 HPT	1865M14P02	GWN0GM84	51927	8200	15000	6800
	17	GE90-100	51927	8200	SEAL, INTERSTAGE HPT	2505M72P01	GWN0WHF6	26493	4100	15000	10900
	18	GE90-100	51927	8200	SEAL, FWD HPT	1865M19P02	NCE886DF	58836	6954	9000	2046
	19	GE90-100	51927	8200	DISK, STG 1 HPT	2445M04G08	GWN0GWD7	51927	8200	14300	6100
	20	GE90-100	51927	8200	DISK, STG 6 LPT	1765M30P01	FIAAV2LH	51927	8200	15000	6800
	21	GE90-100	51927	8200	DISK, STG 5 LPT	2209M28P01	IHIY0418	51927	8200	15000	6800
	22	GE90-100	51927	8200	SHAFT, CONE LPT	2209M29G01	IHIDA437	51927	8200	15000	6800
	23	GE90-100	51927	8200	DISK, STG 4 LPT	2209M27P02	IHIW0407	51927	8200	15000	6800
	24	GE90-100	51927	8200	DISK, STG 3 LPT	2209M26P01	IHIV0512	51927	8200	15000	6800
	25	GE90-100	51927	8200	DISK, STG 2 LPT	2209M25P01	IHIU0492	51927	8200	15000	6800
	26	GE90-100	51927	8200	DISK, STG 1 LPT	2209M24P01	IHIRO485	51927	8200	15000	6800
	27	GE90-100	51927	8200	CASE, STATOR LPT	2082M85G02	WINS17KW	51927	8200	24800	16600
	28	GE90-100	51927	8200	SHAFT, FAN MID	2209M11G03	IHINS412*	51927	8200	15000	6800

Annex "B" (ESN 906151)

GE90 ENGINE WORKSCOPE DATA	
ESN	906-151
ENGINE TYPE	GE110
Aircraft	BGZ
Position	2
Reason of Removal	T/X LLP
Date of Removal	04-04-24
ECSN	11499
ETSN	62010
CSLSV	3899
TSLSV	22255
CSO (HOT SECTION)	3899
TSO (HOT SECTION)	22255

S/N	ESN	MOD (CODE)	NOMENCLATURE	Workscope Required	Remarks
1	906-151	(21X/A)M21	FAN BOOSTER ASSY	Level 4	
2	906-151	(22X/B)M23	NO.1-2 BRG/ASSY	Level 4	
3	906-151	(61X/U)M32	IGB	Level 4	
4	906-151	(62X/V)M33	TGB	Level 4	
5	906-151	(31X/E)M51	HPC ROTOR	Level 4	
6	906-151	(32X/F)M52	HPC STATOR	Level 4	
7	906-151	(41X/F)M45	Combustor Diffuser	Level 4	
8	906-151	(410)M54	COMBUSTOR	Level 3	
9	906-151	(51X/T)M55	ST1 NOZZLE	Level 3	
10	906-151	(52X/L)M56	ST2 NOZZLE	Level 4	
11	906-151	(53X/M)M57	HPT ROTOR	Level 4	
12	906-151	(54X/N)M58	TCF ASSY	Level 4	
13	906-151	(56X/T)M61	LPT ROTOR/STATOR	Level 4	
14	906-151	(57X/S)M63	TRF ASSY	Level 2	
15	906-151	(58X/T)M64	LPT MID-SHAFT	level 2	
16	906-151	(64X/W)M71	AGB ASSY	Leve 3	

NOTES:

- 1 Engine to be built for stub life of Fan Mid Shaft with minimum life of 3501 cycles.
- 2 All open ADs to be complied.
- 3 Consult engine last shop visit document for details of work done during the visit on each module.
- 4 Re work LLPs if applicable for enhancement of their life subject to extent of disassembly of module.
- 5 All accessories to be repaired as per GE90-100 Engine WSPG
- 6 Used LLPs to be installed for replacement to match engine build life.

Important SBs:

In additions to other Mandatory/Recommended SBs, comply the following SBs in case of applicability.
72-0676, 80-0031, 72-0686, 80-0016



**Technical Services Engineering
Power Plant Overhaul Division
PIA Engineering & Maintenance
ENGINES LLP STATUS**

ESN	S/N	Eng. Type	CURRENT ENGINE TSN	CURRENT ENGINE CSN	Nomenclature	PART NO.	PART SR NO.	PARTTSN CURRENT	PART CSN CURRENT	CYCLES LIMIT	CYCLES REMAIN
906-151	1	GE90-100	62010	11499	DISK, STG 1 FAN	2032M68G01	GWN08F28	63078	11453	15000	3547
	2	GE90-100	62010	11499	SPOOL, BOOSTER	351-200-006-0	BC231407	63078	11453	15000	3547
	3	GE90-100	62010	11499	SHAFT, FAN FWD	2209M10G02	IHIDL061	62010	11499	15000	3501
	4	GE90-100	62010	11499	CASE, EXTENSION HPC	351-100-110-0	LA124398	62010	11499	14000	2501
	5	GE90-100	62010	11499	BLISK, STG1 HPC	351-101-011-0	BC478949	65985	12022	15000	2978
	6	GE90-100	62010	11499	SHAFT, CONE HPC	351-102-905-0	DB960360	62010	11499	15000	3501
	7	GE90-100	62010	11499	SPOOL, STG 2-5 HPC *	351-103-110-0	PC093754	33094	6093	8200	2107
	8	GE90-100	62010	11499	DISK, STG 6 HPC	351-100-904-0	BC293511	62010	11499	11500	1
	9	GE90-100	62010	11499	SPOOL, STG 7-9 HPC	2032M23G02	GWN0T4PM	33094	6093	11800	5707
	10	GE90-100	62010	11499	RING, TUBE SUPPORTER	351-101-103-0	DB960495	62010	11499	15000	3501
	11	GE90-100	62010	11499	SEAL, CDP ROTATING	2479M03P01	GEE1GWGL	33094	6093	15000	8907
	12	GE90-100	62010	11499	CASE, FWD HPC	351-104-012-0	DJ948096	33094	6093	25380	19287
	13	GE90-100	62010	11499	CASE, COMBUSTOR	2082M19G01	CDAC9521	62010	11499	18400	6901
	14	GE90-100	62010	11499	CASE, STATOR HPT	2082M18G02	FCP57K9L	62010	11499	13000	1501
	15	GE90-100	62010	11499	SEAL, AFT HPT	1865M17P02	XAE83029	62010	11499	15000	3501
	16	GE90-100	62010	11499	DISK, STG 2 HPT	1865M14P02	GWN095AN	62010	11499	15000	3501
	17	GE90-100	62010	11499	SEAL, INTERSTAGE HPT	2448M33P01	GWN0PWWC	37883	6852	15000	8148
	18	GE90-100	62010	11499	SEAL, FWD HPT	1865M19P02	NCE105JN	35457	6345	9000	2655
	19	GE90-100	62010	11499	DISK, STG 1 HPT	2445M04G09	GWNOHE4N	47841	7002	14300	7298
	20	GE90-100	62010	11499	DISK, STG 6 LPT	1765M30P01	FIAAN03G	62010	11499	15000	3501
	21	GE90-100	62010	11499	DISK, STG 5 LPT	2209M28P01	IHIY0052	62010	11499	15000	3501
	22	GE90-100	62010	11499	SHAFT, CONE LPT	2209M29G01	IHIDA073	62010	11499	15000	3501
	23	GE90-100	62010	11499	DISK, STG 4 LPT	2209M27P02	IHIW0085	62010	11499	15000	3501
	24	GE90-100	62010	11499	DISK, STG 3 LPT	2209M26P01	IHIV0080	62010	11499	15000	3501
	25	GE90-100	62010	11499	DISK, STG 2 LPT	2209M25P01	IHIU0077	62010	11499	15000	3501
	26	GE90-100	62010	11499	DISK, STG 1 LPT	2209M24P01	IHIR0110	62010	11499	15000	3501
	27	GE90-100	62010	11499	CASE, STATOR LPT	2082M85G02	FCP57GTR	62010	11499	24800	13301
	28	GE90-100	62010	11499	SHAFT, FAN MID	2209M11G03	IHIN5044*	52444	9746	15000	5254

Annex-“C”

GE90-100 Engine Routine Modules Fixed Labor Charges

ATA	Module	Nomenclature	LEVEL2	LEVEL 3	LEVEL4
72-21	M21	FAN BOOSTER ASSY			
72-22/26	M23/M24	NO.1-2 BRG/ASSY			
72-61	M32	IGB			
72-62	M33	TGB			
72-31	M51	HPC ROTOR			
72-32	M52	HPC STATOR			
72-40	M45	Combustor Diffuser			
72-41	M54	COMBUSTOR			
72-51	M55	HPT ST1 NOZZLE			
72-52	M56	HPT ST2 NOZZLE			
72-53	M57	HPT ROTOR			
72-54	M58	TCF ASSY			
72-56	M61	LPT ROTOR/STATOR			
72-57	M63	TRF ASSY			
72-58	M64	LPT MID-SHAFT			
72-64	M71	AGB			