

TERMS AND CONDITIONS FOR OVERHAUL AND LIFE EXTENSION OF 04 X MiG-29B/UB AC (SER NO 2960536100B, 2960536506B, 2960536507B & 50903028375UB)

GENERAL

1. The bidder must be the manufacturer/ designer of MiG-29B/UB aircraft or enlisted by Armed Forces Division (AFD), Government of Peoples' Republic of Bangladesh to carry out overhaul of MiG-29B/UB aircraft. The authorized trading house/ agent of the manufacturer/ designer/ firm enlisted by AFD may also participate in the tender on behalf of manufacturer/ designer/ AFD enlisted firm and valid authorization certificate to this effect in original must be submitted along with the offer.
2. The bidder/ overhauling plant must have authorization for life extension of MiG-29 aircraft from the designer/ manufacturer/competent authority of the state/government or separate contract/ agreement/ memorandum with the designer/ manufacturer to carry out life extension of MiG-29 aircraft.
3. The overhauling plant must have the capability and experience for repair, up gradation, overhaul and life extension of MiG-29 aircraft. The bidder is to submit documentary proof of such capability and experience regarding extension of calendar life of aircraft along with the offer mentioning the name of country, type, number of aircraft and period of extension. The bidder is to mention in their offer the methodology for life extension followed by the overhauling plant.
4. The name and address of the plant that will carry out the overhaul and life extension must be mentioned in the offer clearly. The name and address of the plants from where major equipment like RADAR and Fire Control System (RFCS), OESS etc will be overhauled/ upgraded/ modernized are also to be specified. A team of Armed Forces Division (AFD) of the Government of Peoples' Republic of Bangladesh will visit bidder's facilities/ plants (if deemed necessary) to physically see and evaluate the present capabilities of the bidder before or during technical evaluation of his offer. Evaluation of this team will be treated as final.
5. All certificate and documents submitted along with the offer must be in English and recently signed by the authorized executive of the firm.
6. Technical details of 04 x MiG-29B/UB aircraft serial number 2960536100B, 2960536506B, 2960536507B & 50903028375UB are appended below:

Aircraft Serial no	Year of Induction in BAF	TBO (Operation/ Calendar life)	No of OH done	Time since OH as on 30 June 18 (Hrs)	Time since new as on 30 June 18 (Hrs)	Due date of next OH	Remarks
2960536100B	March 2000	800 hrs/ 09 yrs	01	217:40	566:03	08 August 19	Aircraft will be sent for overhaul and life extension after completion of calendar TBO life (08 August 2019).
2960536506B	March 2000	800 hrs/ 09 yrs	01	312:12	554:06	08 August 19	
2960536507B	March 2000	800 hrs/ 09 yrs	01	252:13	494:54	08 August 19	
50903028375UB	March 2000	800 hrs/ 09 yrs	01	672:07	1255:15	08 August 19	

BASIC OVERHAUL AND LIFE EXTENSION UPTO 09 YEARS

7. Aircraft (excluding engines & accessory gear box) are to be overhauled as specified in the repair and overhaul manual of MiG-29 aircraft. Life extensions of the aircraft are to be done as per the prescribed task schedule/ bulletin of the manufacturer/ designer/ overhaul plant.
8. During overhaul, the up-gradation/ modification previously carried out are to be retained. Those up-gradations/ modifications are to be rectified (if required) to make them serviceable.
9. TBO life of aircraft and all its life components after overhaul and life extension should not be less than 800 hours/ 9 years from the date of signing the acceptance certificate by both the bidder's specialists and BAF representative on successful completion of overhaul and life extension and test flight.
10. All structural frames/ components are to be inspected and if found irreparable, those are to be replaced with new/ serviceable ones having full calendar/ operational life at bidder's expenses within the scope of overhaul manual.
11. The overhauling agency is to replace the glass of the windshield and glazing of canopy hinged portion on all 04 x aircraft with new serviceable one during overhaul and life extension.
12. All defective pipelines of all 04 x aircraft are to be replaced with new serviceable ones during overhaul and life extension. All type of hoses are to be replaced with new one.
13. During overhaul and life extension, all air bottles, oxygen bottles and fire extinguisher bottles will be checked/ tested. If any item is found unserviceable, those are to be replaced in accordance with technical documentation.
14. Throttle lock guards (Part No: 5.12.6501.8009.98) of all 04 x aircraft are to be replaced with new serviceable ones during overhaul and life extension.
15. The existing Radar and Fire Control System (RFCS) including AI Radar (HO193), Opto Electronic Sighting System (OESS, 23C) and Helmet Mounted Designation System are to be repaired/repared by replacing required modules/modernized/overhauled to ensure that the RFCS are in the original operational condition/performance/parameters as specified in the Flight Manual of MiG-29 aircraft, Page No-73, 247 & 248. Maintenance Manual of HO193 (BA1.005.039-02PE), Part 1: Page no-21 to 30 and Maintenance Manual of OESS, page no-1 to 4.
16. All other avionics equipment including IFF System (Model: CPO-2 & CP3-15) and their harness fitted in the aircraft are to be checked and items found unserviceable are to be repaired and made serviceable in all respect. Items which are beyond repair or require up-gradation/ modification technically are to be replaced with new/ serviceable ones by items having operation/ calendar life not less than that of the extended life of aircraft.
17. The radar lock breaking button of all MiG-29B/UB aircraft is to be positioned from its present location to the control stick as per BAF requirement.

18. All armament and Photo range items such as bomb rack, adapter for bomb rack, pylon, rocket launcher with tubes, ejection seat, all types of control box, CFD unit, camera with control unit, missile launcher APU-72 (P-72-1D) for R-73E missile and missile launcher APU-470 for R-27 R1 missile etc are to be repaired/ replaced/ overhauled to ensure their serviceability. After signing of the contract, the bidder is to send pre-dispatch inspection team to Bangladesh to check the serviceability of the above mentioned items. If any item is found beyond repair, those are to be replaced with repairable/ serviceable one by BAF. If any of these items is not available at BAF stock, those items are to be arranged by the bidder. All repaired/ replaced items are to be given full TBO (operational/ calendar) after overhaul.
19. Aircraft Gun (part no 9A-4071K) of MiG-29B/UB aircraft is to be overhauled.
20. In addition to the existing 16 x nitrogen bottle fitted with 16 x missile launcher (12xAPU-73 missile launcher for R-73E missile and 04 x APU-470 missile launcher for R-27 R1 missile), the bidder is to carry out required test/ check of additional 36 x spare nitrogen bottle and extend the life up to full TBO.
21. Propellant Actuated Device (pyro cartridges) items of ejection seat (K-36DM), fire extinguisher, wing drop tank and others are to be replaced with new/ serviceable ones and should have full operational life. The bidder is to provide one set of additional ejection safety pin for each K-36DM Ejection Seat after overhaul.
22. HAZ-7M Survival Kit, quantity-01 set is to be provided along with all accessories including 7S8 Signal Cartridge for the ejection seat of each MiG-29B/UB aircraft. Additionally, the bidder is to provide quantity 50 (fifty) 7S8 Signal Cartridge for MiG-29B/UB aircraft ejection seat (K-36DM) after overhaul.
23. The bidder is to submit the list of all critical items/ load bearing structure of the aircraft in their offer. During the process of overhaul and life extension, if any of the critical items/ load bearing structure item is found irreparable, the bidder is to replace the same with new one. Before replacement of the items, the bidder is to inform BAF Headquarters and show the new items to BAF oversee team. On clearance from oversee team, the replacement work will take place.

OPTIONAL (UPGRADATION/ MODIFICATION)

24. The following up gradation/ modification/ modernization are optional. The bidder should quote the price of each of the following up-gradation/ modification/ modernization separately in the offer. However, quoting optional items mentioned in para 24 (a, b, c & d) and 26 is mandatory. If the bidder does not quote the optional items then he is to mention the reason for not quoting. BAF will have option to select any number of up-gradation/ modification/ modernization on the aircraft depending on BAF requirement (if it is found financially viable). The bidder is also to provide description, technical details of the equipment and compatibility of each up-gradation/ modification/ modernization with MiG-29B/UB aircraft.

- a. Installation of Aircraft Satellite Navigation System. The bidder is to install Aircraft Satellite Navigation System including Multi-Functional Display (MFD) in all four MiG-29B/UB aircraft.

b. Modification of ATC Transponder. The existing ATC transponder (CO-69M) does not show the altitude unless the pressure gauge of the altimeter is set to 760 mm. As such, modification of 3/A mode of transponder is to be made to show 'Altitude' and 'Squawk no' of aircraft at any pressure altimeter setting. Such modification must not affect the Fire Control System or any other system of the aircraft.

c. Introduction of EKTRAN-M digital system or its upgraded system by replacing existing EKTRAN system.

d. New Digital Audio video Registration System is to be installed to record audio (internal and external radio communication) and 3 video streams (space behind cockpit, information of HUD and panel board) at real time for objective control and post flight analysis through playback system.

e. There should be provision to supply DC power through rectifier (VU-6B) in case of failure of DC generator.

f. The bidder is to upgrade/ modify aircraft armament system including RFCS to have provision of Anti-surface (Anti-ship missile) capability. Detail is to be mentioned in the offer.

25. Spare Availability. The bidder is to ensure the availability of spare modules/ units which would be used for up-gradation of existing RFCS, MFD, upgraded navigation system for next 10 years after completion of warranty period.

26. Extended Warranty. The bidder is to quote extended warranty for 36 months in addition to normal warranty period (18 months) for RFCS. During this period, bidder is to provide required spares and technical support to keep RFCS serviceable. Any un-serviceability of more than 30 days will be added to the total warranty period.

27. The bidder is to quote the necessary tester/ test equipment to check performance of the modernized RFCS, MFD, newly installed navigation system and other systems with price separately. BAF would have the option to accept all or some/ none of the proposed tester/ test equipment.

28. The bidder may submit any other option to improve armament capability of existing MiG-29 B/UB aircraft along with the offer.

OTHER TECHNICAL TERMS AND CONDITIONS (APPLICABLE FOR ALL OPTIONS)

29. Any mandatory bulletins/modifications already due since inception in BAF or will fall due during overhaul and life extension must be carried out within the contracted price and compliance of bulletins/modifications (if any) is to be recorded in the log book/certificate in English and signed by authorized personnel of the plant. All the mandatory bulletins/modifications related to safety which will be carried out during overhaul and life extension of the aircraft should be supplied to BAF in English.

30. If any of the system is modified during overhauling and life extension, the necessary maintenance and operation manuals/ schematic (circuit) diagrams are to be provided with the aircraft in English. If any GSE/ test equipment is required for modification/ up-gradation of any system, the list with price is to be submitted along with the offer.

31. The overhauling agency is to remove existing paint, surface corrosion and inspect for possible cracks in every possible places of aircraft skin, rivet joints, different fairings and intake and exhaust ducts. Overhauling agency is to replace cracked skin instead of patchwork with a new panel, fillet, fairing etc as applicable and apply anti-corrosive treatment and primers. Aircraft is to be re-painted with all necessary marking and logo. The bidder is to ensure the quality of painting of the aircrafts for the total TBO. Color scheme will be provided by BAF during overhaul.

32. During overhaul anti-corrosive treatment is required to be carried out in wing root joint, both air intake side walls, brackets, stabilizer control bell crank and corrosion-prone places of airframe.

33. After completion of overhaul, chief inspector authorized by the manufacturer/ designer of MiG-29B/UB aircraft or chief inspector of the overhauling plant is to certify the completion of overhaul of aircraft and its components. The authorized inspector of designer/ manufacturer or Chief Inspector of the overhauling plant is to sign and certify about the life extension of the aircraft after life extension.

34. After the overhaul and life extension, all aircraft including their equipment are to be given 150 flying hours/ 18 months (whichever comes earlier) warranty period from the date of Acceptance by Bangladesh Air Force. If the aircraft or any component becomes unserviceable within warranty/guarantee period, the bidder is to rectify the aircraft/component at their own expense within 2 months from the date of reporting of the discrepancies. Both ways freight and insurance charges for warranty repair must be borne by the bidder. Period of un-serviceability for more than two months will be added to the total warranty period.

35. The turnaround time of four MiG-29B/UB aircrafts overhaul and life extension should not exceed 365 days. This duration will be counted from the date of shipment of the aircraft for overhaul from Bangladesh till the date of shipment of the aircraft from the overhauling country after overhaul.

36. The aircraft and its components TBO after the life extension and overhaul are to be 800 hours/09 years from the date of acceptance of aircraft in BAF.

37. All necessary documents during overhaul of the aircraft are to be made by the bidder in respective forms/ history books and all the documents are to be returned to BAF along with the aircraft.

38. The bidder may carry out pre-tender inspection of the aircraft at BAF site at their own expenses before submitting the quotation. In that case BAF will arrange security clearance (by Specialist Directorate) for carrying out pre-tender inspection by bidders (if require). Bidder will provide particulars of the specialists 04 weeks prior to the schedule date of visit.

39. The bidder is to ensure the overall safety of the aircraft and all its accessories during transportation. The bidder will be responsible for the aircraft and its components for any damage, deterioration, distortion during overhaul in bidder's facility.

40. While handing over 04 x MiG-29B/UB aircraft for crating, BAF will provide 03 x serviceable RD-33 engine and 01 x serviceable Accessory Gear Box (AGB) to facilitate ground run and functional test flight of aircraft at bidder's facility. The bidder is to check all the parameters & serviceability of engine and AGB in all respect before taking over the engine and AGB at Bangladesh with the aircraft. The bidder is to ensure proper preservation of the engine and AGB during overhaul of the aircraft in bidder's facility. Minor discrepancy found in engine/ AGB is to be rectified/ adjusted by the bidder.

41. The bidder is to quote the cost of transportation of the aircraft and all aggregate/ accessories by air from Bangladesh to overhauling plant for overhaul and plant to Bangladesh after overhaul in the offer.

42. The aircraft will be handed over to the repair/ overhauling agency at Dhaka for disassembly, crating and subsequent transportation/ shipment by air. All expenditure of disassembly, crating and transportation of the aircraft and all aggregate/ accessories by air from Bangladesh to overhauling plant for overhaul and plant to Bangladesh after overhaul shall be borne by the bidder.

43. Disassembly and crating of the aircraft shall be done under supervision of bidder's specialist at BAF facility and acceptance/handling over certificate will be signed by bidder's specialist and BAF representative.

44. BAF will arrange security clearance for the visit of bidder's specialist for disassembly, re-assembly and test flight of aircraft. Accommodation, food, transportation, medical care and all other expenses of the specialist team including pilot & interpreter in Bangladesh will be borne by the bidder and necessary arrangement will be made by bidder. The name and particulars (passport) of bidder's specialists are to be sent to BAF at least 45 days prior to their arrival in Bangladesh.

45. Provision is to be made by the bidder for training/ oversee of a BAF team as mentioned below:

a. Team will include a six member (02 x Engineering Officer, 04 x Technicians) on the overhaul and life extension activities for the entire period at bidder's expense. The bidder is to propose schedule for oversee/ training team. (The financial offer is to be submitted by the bidder in this regard). The bidder is to impart training to airframe, E&I, armament, radar trade technicians. The training schedule and syllabus should be intimated to BAF before their arrival in the plant. The training materials/ précis in English are to be provided after arrival of BAF team.

b. The cost of food, accommodation, internal transportation and medical care for BAF team is to be borne by the bidder. The bidder is to quote separately for each person (except both ways air tickets), which are to be included in the contract.

c. BAF will provide both ways air tickets.

d. BAF will have the option to decide whether this training/ oversee provision will be kept in the contract or not and to reduce the number of the team members.

e. The bidder is to ensure that BAF training team is allowed to see the overhauling process, check the logbooks, certificates, replaced components and any other associated documents/ items during their stay at the overhauling facility.

46. After overhaul & re-assembly of aircraft at the plant, the bidder is to make provision for BAF pilot to oversee the test flight carried out by the bidder's pilot to check serviceability of all the systems and sub-systems of the aircraft in all respect as per BAF requirement. To oversee the Functional Check Flight (FCF) BAF will send 02 x Pilot to the bidders facility for two weeks after assembly of the aircraft. The bidder is to intimate the FCF schedule and arrival of BAF pilot at the plant at least 06 (six) weeks before, so that BAF pilot can be positioned at the plant in time prior to FCF. The cost for food, accommodation, internal transportation and medical care for two members BAF pilots will be borne by the bidder and to be quoted separately in the offer (except both ways air tickets), which will be included in the contract. However, BAF will have the option to decide whether the provision of oversee by BAF pilot will be kept in the contract or not at bidder's facility. BAF will provide only both ways air ticket to the BAF pilots. BAF pilots will go to the bidder's facility once the aircraft is ready for FCF after overhauling. Necessary security clearance and visa formalities for the team are to be done by the bidder.

47. After re-assembly of overhauled aircraft in Bangladesh by bidder's specialists, Functional Check Flight (FCF) of each aircraft is to be done by the bidder's pilot to ensure serviceability of aircraft in all respect. On completion of satisfactory FCF by Bidder's pilots (both MiG-29B and MiG-29 UB), BAF pilot would carry out FCF separately according to the flight manual (which is followed after 200 hours periodic inspection in BAF). On satisfactory FCF and ground check, the acceptance certificate of the aircraft will be signed by both sides as per Appendix-1 of Annex 'A'. After acceptance of the aircraft, separate armament mission will be carried out within maximum four weeks to check the functionality of RFCS to confirm the parameters offered by the bidder. Separate acceptance certificate will be signed on satisfactory performance of RFCS as per Appendix-2 of Annex 'A'.

FINANCIAL OFFER

48. All costs are to be mentioned in US dollars (USD) in CPT basis.

49. Quoting price of the followings is essential:

- ✓ a. Price of basic overhaul (excluding price of repair/repair by replacing modules/modernization/overhaul of RFCS (RADAR+OESS) as per para 15) as per para 7 to 23.
- b. Price of repair/repair by replacing modules/modernization/overhaul of RFCS (RADAR+OESS) as per para 15.
- c. Para/ sub-para wise price of modernization as per para 24 (a, b, c & d) and para 26.
- d. Price of Tester/ Testing equipment as per para 27 & 30.
- e. Cost of training, oversee FCF mentioned in para 45 & 46.

50. Cost of overhaul/ life extension is to be Firm and Fixed. No increase of price at any stage after signing of the contract will be accepted by BAF.

51. The bidder is to quote overhaul cost of each aircraft separately. BAF will have the option to select all or any number of aircraft to be overhauled depending on BAF requirement.

52. Lowest bidder (tech accepted) will be selected on the basis of following (as per para 49):

- a. Basic overhaul cost (as per para 7 to 23).

- b. Freight charge (as per para 41).
- c. Cost of repair/repair by replacing modules/modernization/overhaul of RFCS (RADAR+OESS) (as per para 15).
- d. Optional item mentioned in para 24 (a, b, c & d), 26 and other optional items as decided by BAF.
- e. Cost of training, oversee FCF (as per para 45 to 46).

MISCELLANEOUS TERMS AND CONDITIONS

53. The bidder is to be responsible for ensuring proper government license/permission for importing the contracted goods from Bangladesh to the repair/overhaul plant and their return to Bangladesh. The bidder is also responsible for proper permission for the en-route customs and port formalities/clearance for the contracted goods. The bidder's failure to return the goods to Bangladesh, occasioned for reasons on this ground would make him liable to compensate the full value of the contracted goods to DGDP.

54. The bidder is to possess Government license/approval for importing/re-exporting of tendered military items from and to country where the overhaul/repair plant is located. In case the same is not in bidder's possession, then bidder is to confirm that they will intimate DGDP about the possession of such license/approval within 30 days of opening the operative Letter of Credit (LC). BAF will dispatch items after above confirmation from the bidders. For failure to confirm above DGDP may cancel the contract.

55. If the overhaul/repair plant and the bidder are in two different countries then the item/items has/have to be sent to overhaul / repair plant. In this case the bidder is to produce a certificate from the overhaul /repair plant to this effect that:

- a. The plant has the requisite Govt. license for importing and re-exporting the tendered / contracted military goods.
- b. The plant will clear the items from the customs at their total responsibilities.
- c. The plant will return the contracted goods to BAF after repair/ overhaul as per the contract.

56. The bidder is to mention the country of shipment in the offer.

57. The bidder must mention the name and full address of the local agent (if any) in the offer.

58. Part shipment: Allowed.

59. Part payment: Allowed if the aircrafts are shipped in phases.

60. During the custody of the goods with the bidder, it will be his (bidder) responsibility to ensure its safety and proper condition. As such, if any loss, damage or deterioration in condition of the items occurs, it will be bidder's liability to get it in the right condition.

61. Transshipment is not normally allowed but if the bidder needs transshipment then they are to mention in the offer about their requirement. In case of such requirement, the transshipment will only be allowed under single AWB/BL.

62. The bidder is to quote repair/ overhaul cost and freight charges by air clearly in US dollar.

63. Offer must remain valid for minimum 180 days or as per tender conditions from the date of opening of the tender. Within the validity of the offer, withdrawal of offer or un-willingness to sign the contract by the bidder will not be accepted and in such cases actions would be taken against the principal bidder and local agent as per DGDP rules. Delivery schedule if mentioned in the tender specifications may be changed by DGDP/BAF due to delay in concluding the contract. In this case, the contract would be signed within offer validity period. DGDP/BAF also reserves the right to get the offer validity extended with the consent of the bidder.

PAYMENT TERMS

64. 100% Payment will be made through irrevocable LC. The LC will be opened with any scheduled bank in Bangladesh in favor of bidder. Payment will be made under following terms and conditions:

a. 70% of LC value {excluding the value of repair/repair by replacing modules/modernization/overhaul of RFCS (RADAR and OESS)} will be paid on production of the following documents :

- (1) Airway Bill (AWB).
- (2) Invoice.
- (3) Packing List.
- (4) Bidder's warranty/ guarantee certificate.
- (5) Quality certificate.

b. 20% of LC value {excluding the value of repair/repair by replacing modules/modernization/overhaul of RFCS (Radar + OESS)} will be paid on production of the acceptance certificate signed by both sides as per appendix '1' of terms and conditions after handing over the aircraft to BAF.

c. Remaining 10% of LC value {(excluding the value of repair/repair by replacing modules/modernization/overhaul of Radar and Fire Control System (RFCS)} will be paid on expiry of warranty period.

d. 70% of the value of repair/repair by replacing modules/ modernization/overhaul of RFCS (Radar + OESS) will be paid on production of the satisfactory acceptance certificate signed by both sides as per format given in appendix '2' after handing over the aircraft to BAF.

e. 20% of the value of repair/repair by replacing modules/ modernization/overhaul of RFCS (Radar + OESS) will be paid after satisfactory performance of RFCS for 06 x months.

f. Remaining 10% of LC value of repair/repair by replacing modules/modernization/overhaul of RFCS (Radar + OESS) will be paid on expiry of warranty period.

65. The bidder may propose any other payment terms if felt necessary.



SPECIMEN OF ACCEPTANCE CERTIFICATE

ACCEPTANCE CERTIFICATE

The present acceptance certificate is drawn on theto certify that MiG-29B/UB aircraft serial number..... have been overhauled in conformity with MiG-29 aircraft Maintenance/ Overhaul Manual and Component Repair/ Overhaul Manual issued by the aircraft manufacturer and the work specified in the contract dated.....The aircraft have been checked on the ground by the contractor's and BAF's Technicians and in flight by the contractor's and BAF's aircrew. The aircraft and all its equipment and systems and sub systems including AI Radar (for MiG-29) and IRST are serviceable and operating normally and satisfactory. The aircraft is in airworthy condition and fit for all types of operation including armament flight.

For and on behalf of
The Supplier

For and on behalf of
The BAF



APPENDIX 2 OF ANNEX B TO
06.06.0000.272.26.208.18
DATED : November 2018

SPECIMEN OF ACCEPTANCE CERTIFICATE

ACCEPTANCE CERTIFICATE

The present acceptance certificate is drawn on theto certify that the **RFCS (Radar + OESS)** of MiG-29B/UB aircraft serial number..... have been overhauled in conformity with MiG-29 aircraft Maintenance/ Overhaul Manual and Component Repair/ Overhaul Manual issued by the aircraft manufacturer and the work specified in the contract dated.....The aircraft have been checked on the ground by the contractor's and BAF's Technicians and in flight by the contractor's and BAF's aircrew and found RFCS (Radar + OESS) of the said aircraft are serviceable and operating normally and satisfactory. The aircraft is in airworthy condition and fit for all types of operation including armament flight.

For and on behalf of
The Supplier

For and on behalf of
The BAF

