

Bid invitation

Information

Description:ZMN/1900022499,560-568/ENG
PAINTING/19
Bid invitation number:6300029574

Bid invitation rules

Bid invitation currency: INR
Timezone: UTC+53
Submission period: 21.10.2019 14:00:00
Opening date: 21.10.2019 14:30:00
Created On: 27.09.2019 03:07:54

Bid invitation text:

LABOUR CHARGES FOR PAINTING OF BEML ENGINES

TENDER TERMS AND CONDITIONS:

1. PAYMENT TERMS: 100% PAYMENT WITHIN 7 DAYS FROM THE DATE OF SUBMISSION OF MONTHLY BILLS DULY CERTIFIED BY USER DEPARTMENT. IF FIRM/FIRMS ARE QUOTING PAYMENT TERMS AS ADVANCE/PROFORMA INVOICE, FIRM HAS TO AGREE FOR GIVING BANK GUARANTEE FROM A SCHEDULED COMMERCIAL BANK FOR 110% OF THEIR INVOICE VALUE,AND THEN ONLY ADVANCE PAYMENT WILL BE MADE. IF FIRM DOES NOT AGREE FOR THE SAME AND ONLY QUOTES FOR ADVANCE/PROFORMA INVOICE, SUCH BIDS ARE LIABLE FOR REJECTION, AND THEIR OFFER WILL NOT BE CONSIDERED AND NEXT LOWEST TECNICALLY ACCEPTED OFFER WILL BE CONSIDERED.THE BG SHOULD BE VALID FOR A PERIOD TILL THE MATERIAL IS RECEIVED AND ACCEPTED BY BEML.
2. PRICES: PRICES ARE FIRM TILL THE EXECUTION OF THE ORDER.
3. DELIVERY TERMS: DELIVERY AS PER BEML SCHEDULE.
4. DESPATCH TERMS: F.O.R. BEML MYSORE.
5. RISK PURCHASE CLAUSE: BEML RISK PURCHASE CLAUSE WILL BE APPLICABLE.
6. LD CLAUSE: BEML LD CLAUSE WILL BE APPLICABLE IN CASE OF DELAY IN DELIVERY.
7. TAXES: FIRM HAS TO MENTION HSN CODE AND APPLICABLE GST.
8. THE TENDERS SHOULD CONFIRM TO BEML SPECIFICATIONS, MAKE AND CONDITIONS IN EVERY DETAIL AND ANY TENDER NOT CONFIRMING TO BEML SPECIFICATIONS AND CONDITIONS WILL BE SUMMARILY REJECTED.
10. ANY AMENDMENT TO THIS TENDER WILL BE PUBLISHED ONLY IN BEML WEBSITE AND NOT IN CPP PORTAL. VENDORS TO NOTE THIS.
11. VENDORS TO QUOTE ONLY FOR LABOUR CHARGES FOR CARRYING OUT PAINTING ACTIVITIES FOR EACH ITEM MENTIONED. SUPPLY OF PERSONAL PROTECTIVE EQUIPMENT(PPE), CONSUMABLES AND

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OTHER RELATED ITEMS IS BEML SCOPE.

11. SCOPE OF WORK AND TERMS&CONDITIONS ARE ATTACHED IN THE "NOTES AND ATACHMENTS" SECTION.

12. VENDORS TO ATTACH ANY DETAILS/ATTACHMENTS RELATED TO THE TENDER IN THE "NOTES AND ATACHMENTS" SECTION.

13. L-1 WILL BE ARRIVED AT CONSIDERING THE TOTAL VALUE OF ALL THE ITEMS IN THE TENDER.

Any item specific remarks / comments can be mentioned in "Bidders Remarks" column under Item Data. Please contact our SRM Team for guidance on submission of bids in SRM syst

Phone number: (080) 22963269 / 22963141

E-mail ID: admin.srm@beml.co.in

Please contact Materials Department, Mysore Complex for any technical clarifications. Phone number: (0821) 2400277/2400503

E-mail ID : zmnc@beml.co.in, ymn1@beml.co.in

Attachments:

GENERAL TERMS&CONDITIONS

SCOPE OF WORK

T&C

COMPANY STDS

Bid invitation details

Item	Product Price Condition	Description	Vendor product number	Delivery date/ performance period	Quantity
1		LABOUR CHARGE PRIMER PAINT 170 SERIES			325 NO
Item long text: LABOUR CHARGES FOR PRIMER PAINTING(SINGLE COAT) OF 170 SERIES OE/REMANUFACTURING/SPARES ENGINES. SURFACE AREA = 17.55 sq.mtr.					
2		LABOUR CHARGE PRIMER PAINT 140 SERIES			133 NO
Item long text: LABOUR CHARGES FOR PRIMER PAINTING(SINGLE COAT) OF 140 SERIES OE/REMANUFACTURING/SPARES ENGINES. SURFACE AREA = 14.8 sq.mtr.					
3		LABOUR CHARGE PRIMER PAINT 125			176 NO

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Item	Product Price Condition	Description	Vendor product number	Delivery date/ performance period	Quantity
		SERIES			
Item long text:					
LABOUR CHARGES FOR PRIMER PAINTING(SINGLE COAT) OF 125 SERIES OE/REMANUFACTURING/SPARES ENGINES. SURFACE AREA = 13.1 sq.mtr.					
4		LABOUR CHARGE PRIMER PAINT 105 SERIES			133 NO
Item long text:					
LABOUR CHARGES FOR PRIMER PAINTING(SINGLE COAT) OF 105 SERIES OE/REMANUFACTURING/SPARES ENGINES. SURFACE AREA = 8.1 sq.mtr.					
5		LABOUR CHARGE -2nd COAT PRIMER PAINT ,			65 NO
Item long text:					
LABOUR CHARGES FOR 2ND COAT PRIMER PAINTING OF BD50 ENGINES. SURFACE AREA = 8.1 sq.mtr.					
6		LABOUR CHARGE, FINISH PAINT 170 SERIES			180 NO
Item long text:					
LABOUR CHARGES FOR FINISH PAINTING(SINGLE COAT) OF 170 SERIES OE/REMANUFACTURING/SPARES ENGINES. SURFACE AREA = 17.55 sq.mtr.					
7		LABOUR CHARGE, FINISH PAINT 140 SERIES			68 NO
Item long text:					
LABOUR CHARGES FOR FINISH PAINTING(SINGLE COAT) OF 140 SERIES OE/REMANUFACTURING/SPARES ENGINES. SURFACE AREA = 14.8 sq.mtr.					
8		LABOUR CHARGE, FINISH PAINT 125 SERIES			43 NO
Item long text:					
LABOUR CHARGES FOR FINISH PAINTING(SINGLE COAT) OF 125 SERIES OE/REMANUFACTURING/SPARES ENGINES.					

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Item	Product Price Condition	Description	Vendor product number	Delivery date/ performance period	Quantity
		SURFACE AREA = 13.1 sq.mtr.			
9		LABOUR CHARGE, FINISH PAINT 105 SERIES			31 NO
Item long text:					
LABOUR CHARGES FOR FINISH PAINTING OF 105 SERIES OE/REMANUFACTURING/SPARES ENGINES. SURFACE AREA = 8.1sq.mtr.					
10		LABOUR CHARGE-FINISH PAINT GREEN BD50			35 NO
Item long text:					
LABOUR CHARGES FOR FINISH PAINTING(SINGLE COAT) OF BD50 ENGINES. SURFACE AREA = 8.1 sq.mtr.					

ENCLOSURE TO BID INVITATION 6300029574

LABOUR CHARGES FOR PAINTING OF BEML ENGINES AT PAINTING AREA.

- **It is only a labour charge. Material(PU Primer,Finish Paint with Hardener,PU Thinner,Paint Brush,Paint Gun,Painting equipment,Adhesive Tapes,LDPE Masking Rolls,Plastic Caps,Personal Protective Equipment),Crane Facility will be provided by BEML.**
- **Work to be carried out as and when required by User Department (ZFT Dept).**

Terms and Conditions

1. The period of contract is for ONE year from the date of release of Purchase Order. Contract is liable for termination by giving 04 months advance notice mutually agreed upon subject to deduction of Security Deposit on pro-rata basis for the balance period of contract.

The conservative estimated value of the contract is around Rs 6.55 Lakhs. BEML will not give a commitment on the value of the contract. The value of the contract for the year may be revised upwards or downwards based on market requirement and will be at the sole discretion of BEML.

2. **BILLING**

Bills for the month should be submitted in the following month immediately after making payment to the labourers. GST is applicable for the same. Firm has to provide the HSN/SAC Code with applicable % GST.

3. **PAYMENT TERMS:**

Payment: 100% payment will be made Payment: 100% payment will be made within 3 days(before 7th of every month) from the date of submission of bills duly certified by BEML LIMITED's User depts., (Final Painting, Quality Engg), HR Dept. and Finance Dept. The firm shall indicate suitably in their invoice regarding 2% income tax as per Finance Act 1972 sec 194c. The invoice should be attached with the work completion certificate duly certified by the shop in-charge and quality control department in-charges. The firm shall employ labour in sufficient number to achieve the required rate of progress and ensure best workmanship of the degree required under various specifications and to the satisfaction of Engineer-in-Charge. The firm shall remain liable for the payment of all wages or other remuneration to his labourers or employees under the Contract Labour Abolition & Regulation Act 1970, Payment of Wages Act – 1936, Minimum Wages Act 1948, EPF&Misc. Provisions Act 1952, Income Tax Act 1961 & Service Tax Rule 1994,

Employees Liability Act 1938, Workmen's Compensation Act 1923, ESI Act 1948, Payment Bonus Act 1965(to be paid to the labourer by the Contractor), Payment of Gratuity Act 1972 or any other Acts or enactment relating thereto and Rules framed there-under from time to time. In the event the firm fails or neglects to pay amount, liable to be paid by him under Workmen's Compensation Act, ESI Act or other Labour laws, the company is entitled to withhold the payment due to him or any other amount entitled by him and remit the same to the authorities concerned such payment shall be binding on the firm.

Revision in Basic and VDA notified by the Central Government from time to time during the contract period will apply to the contract labourers and same will have to be borne by the Contractor.

4. **SECURITY DEPOSIT** The successful bidder has to provide Security Deposit for 10% of the total annual contract value (excluding Taxes and duties) in the form of Bank guarantee obtained from a scheduled Bank and valid for contract period plus 3 months from the date of contract. The above deposit will be held by the company as security for the satisfactory performance of the contract. All compensation or other sums or money payable by the contractor to the company under the terms and conditions of this contract may be deducted from the above security deposit or from any sums that may be due or may be due or may become due, to the contractor by the company on any account what-so-ever, and in the event of the security deposit being reduced by reasons of any such deductions, the contractor shall within 10 (Ten) days thereafter make good these deductions. Security deposit will be refunded to the contractor after completion of contract plus 3 months.
5. BEML Risk Purchase Clause will be applicable.
6. **LIQUIDATED DAMAGES** and not by way of penalties will be recovered for delayed supply in Manpower @ 0.5% of the price of any job not delivered per week or part therefore subject to maximum of 5% of the value of the delayed portion of the Purchase Order.
7. In the event of firm failing of neglecting to carry out the work, BEML shall be entitled to recover damages from the Firm such damages being equivalent to the extra amount which the company is obliged to pay for getting the work done and in addition will be entitled to recover the expenses incurred at BEML's discretion.
8. The contractor shall hold license under Contract Labour (Regulation&Abolition) Act, 1970 and the rules framed there under before commencement of the work and continue to hold it till the completion of contract period. A copy of such license to be made available to BEML by the contractor.
9. The contract is liable to be terminated without any notice period or without any compensation if found that the personnel of the contractor are involved in activities against the interest of the company.
10. The contractor has to comply with the Service Tax Rule, 1994 and any other orders issued there under and get registration under the Central Excise Department for payment of Service Tax on the services of manpower recruitment agency.
11. The firm shall depute their Skilled / experienced Representatives to carry out the work. Minimum qualification for labourers should be 7th Standard Pass. Also labourers absenting for more than 6 days without valid reason should not be engaged.
12. Labour not below the age of 18 years should be engaged to carry out the subject work.
13. **SAFETY & STATUTORY REQUIREMENTS:**
 - The firm shall comply with all safety regulation and statutory requirements as per Factories Act 1948. The contractor has to ensure that the contract workers wear appropriate PPE

(Personnel Protective Equipment) provided by BEML as applicable to the work situation and also provide medical certificate as proof of periodic health check of the contract employees. This is a mandatory requirement of ISO 14001: 2004 and OHSAS 18001:2007.

- The Statutory requirements like ESI/PF/Labour License Contract/Labour Insurance in respect of contract workers will be taken by the firm and a monthly return would be submitted by them to HRD for verification. The extension of ESI&PF benefits to the labourers of the contractor will be applicable only during the contract period. Contractor has to provide a copy of the PF registration and ESI code allotment letters.
- The firm shall take full responsibility for taking precautions to prevent loss or damage to the property of BEML Ltd., They shall be liable for any damage or loss that may happen to the works or any part thereof. In addition, the contractor shall indemnify & keep the company indemnified against all losses & claims for injuries or damages to any person or any property whatsoever which may arise out of or in consequence of the works. For this purpose, all the personnel employed by contractor shall be covered by All Risk Insurance Policy. The Insurance Policy has to be kept valid till the contract period is completed. The Policy shall be taken at firm's cost showing BEML LTD as the PRINCIPAL to simplify the work in the matter of raising claims and settlement thereof.

The firm shall keep BEML LTD fully indemnified and harmless at all times in respect of breaches if any of the said laws and against claims for workmen on any account. The firm/contractor shall possess the following mandatory requirements of BEML LTD as under:

- a) PF registration Code Number (Karnataka State)
- b) ESI registration Code Number (Karnataka State)
- c) Income Tax PAN number
- d) Valid Labour License issued by Labour Department

The documents in original shall be presented on demand to BEML LTD as and when required.

14. BEML LTD shall not be at any time responsible for any injuries caused due to accident within the factory premises or at the place of work. The firm shall make proper arrangements for medical treatment to their personnel. In the event of any accident/injury/disablement, the Firm shall arrange to pay the requisite compensation legally payable to the concerned labourers/dependents and also indemnify BEML in case of any claims arising there of later.
15. BEML LTD shall provide first aid to firm's workmen in case of emergencies which will be on chargeable basis.
16. The firm should possess the required license issued by the office of the Asst. Labour Commissioner (Central) ,Bangalore Karnataka under section 12(1) of the contract labour (Regulation & Abolition Act 1970) for taking up the contract inside BEML LTD.,

17. Safety Aids:

BEML will provide all necessary safety aids and personal protective equipment (PPE) like Helmets, Hand Gloves, Aprons, Safety Shoes, Gum Boots, Goggles, Nose Masks, and Ear Plugs etc. to the workmen so as to ensure their safety on the job. The Firm should ensure that the workmen will wear them daily while on duty. BEML will ensure that PPE are of good quality and must be replaced once

their useful life is over. The same will be verified for strict compliance by the company's safety officer.

18. The entire operation of material handling equipment etc., associated with the works shall be at the risk of the party and arranged for by the workmen..
19. The firm has to pay minimum wages along with PF and ESI contributions to the contract workers engaged by them as per Central government rules and forward a statement along with signatures from their employees for having received their payments on time and in full. In the event of the contractor fails or neglects to pay amount, liable to be paid by him under workmen's compensation Act, ESI Act or other labour laws, the company is entitled to withhold the payment due to him or any other amount entitled by him and remit the same to the authorities concerned such payment shall be binding on the contractor. The above payment statement should be enclosed with PF and ESI remittance documents/ Challans/bills etc., in respect of workmen engaged and the same will be attested by our Personnel Department. Child labour is prohibited. All persons employed by the firm should be covered by ESI and PF and other statutory acts that are in vogue and that may come into being from time to time. Firm shall produce proof of above to BEML LIMITED. All personnel employed by the firm should be covered by Accidental / Death Insurance and firm should produce proof to BEML Ltd.

20. Working hours and Personnel deployment:

The workmen deputed should work in two shift basis as per the shift timings which is already operational in the complex. However, in case of urgency/emergency third shift operation shall also be done. In addition to presently available labourers, adequate man power should be deployed to complete the work as per requirement. The firm should also deploy additional man power in case of exigency and Sundays / Holidays / Leaves / Absenteeism. If the workload is increased, the workman may have to overstay in order to complete the works on time after taking permission of the shop in-charge and security department. Sufficient supervisors must be deployed in each shift in-turn will co-ordinate with shop-in-charge, Quality Inspector for works to be carried out / progress & certification.

21. All personnel will be paid minimum wages as per statutory requirement. Firm shall make payment to the personnel before 7th of each month. All the personnel shall wear a uniform provided at all times when in BEML LTD.'s premises, which will be different and distinguishable from BEML LTD.'s Uniform. The firm shall arrange photo identification card to his personnel which shall be countersigned by the security department of BEML Limited and should be displayed on the workmen at all times while in BEML LTD. premises.
22. The firm will make arrangements for proper Supervision/Inspection of the painting works by qualified/certified personnel. The firm or his authorized representative should be present in the work spot during working hours to receive instructions from the shop-in-charge to carry out the work every day effectively and satisfactorily.
23. The firm shall comply all the provisions of contract labour (R&A) act 1970 and Central rules made there under and minimum wages act 1948 and rules made there under applicable to him. BEML LTD. shall not be responsible for any injuries caused due to accident within the factory premises or at the place of work. The firm should make proper arrangements for medical attention and treatment to his staff. The firm will cover his staff under ESI scheme which will help them to receive medical attention during employment, sickness etc., including compensation for injuries arising out of employment and during the course of employment.

24. The number of hours of work performed by the adult worker will be governed by Factories Act / Minimum wages act and forward the statement along with signatures obtained from their employees for having received their payments on time and in full. The above statement should be enclosed with PF and ESI remittance documents and should be coordinated by the BEML LTD. Personnel Department. The PF and ESI Challans along with the bills in respect of the workmen engaged will need Personnel Department coordination else bills will not be paid. Child labour will not be permitted.
25. Firm shall acknowledge the acceptance of the PO duly signed by authorized representative within one week from the receipt of the PO.
26. Canteen facilities will be extended at concessional rate only to the personnel who are on duty. The firm has to buy the canteen coupons depending upon his total requirement from the accounts department on payment basis and distribute the canteen coupons to his labourers on the date of wage disbursement day. The firm has to recover the cost of coupons from his labourers to the extent of coupons given to them. The company will not provide transportation facilities to the labourers engaged by the firm.
27. BEML reserves the right to check the correctness of any information furnished and if found incorrect, the firm will be blacklisted. BEML reserves the right to reject any firm without assigning any reasons.
28. The contractor should maintain and run the contract with the existing labourers and ensure efficient functioning of the painting works as per identified strength of manpower to carry out the job. The labourers shall be dutiful and obedient and execute the works assigned to them continuously and efficiently. Work has to be carried out without disturbing the working atmosphere. No inconvenience should be caused to the officers/employees movements.
29. The firm shall be deemed to have studied the scope of work and extent of work thoroughly for the unit price finalized which shall be deemed to include for all works necessary to ensure that the complete work is sound and is with a neat and good finish.
30. In case of any reduction in the existing staff due to separation during the contract period, **NO replacement will be provided by BEML.** The contractor has to bring his own staff duly covered under PF and ESI and the monthly wages to them shall be borne by the contractor. However, prior approval of the Management should be obtained.
31. Management reserves the right to ask the firm to dispense with the services of any labourers who is reported to be of doubtful integrity. The contractor shall carry out police verification and antecedents of all personnel deputed at BEML Ltd., Mysore and submit a copy of the same along with the individuals Bio-Data in a format to the Chief of Security Dept of the Complex with in stipulated period.

32. DISPOSAL OF EFFLUENTS

Disposal of painting waste, sludge, empty drums, Masking tapes, filters (and other equipment that are considered as contaminated with paints and thinners as per PCB guide lines) will be under the scope of the firm. This shall be done in line with the local PCB & CPCBs requirements

as the case may be. The muck shall be cleared from site at least once a month. In case of non compliance or disputes with PCB or other statutory or other bodies regarding this, the firm will have to take full responsibility.

33. Secrecy Clause :

All information and technical data , specifications, drawings , models, specimens furnished by BEML for any purpose in connection with painting or otherwise shall constitute the property of BEML and the party shall keep them in strict confidence and shall not divulge the same to anyone else without except under the written authority and for the purpose of BEML . All such data shall be the property of BEML and shall be returned to BEML when done with it or when demanded by BEML. Party shall not disclose any initiation, written developments or adaptations, thereof to anyone else except with the written consent of BEML.

34. LAWS APPLICABLE

The Laws of India for the time being in force or as amended from time to time. The marking of all stores supplied must comply with the requirements of Indian Acts relating to trade and merchandise marks and all the rules made under such acts.

35. JURISDICTION

Courts at Mysore alone shall have jurisdiction to decide any issue/dispute arising out of the Arbitration or this Purchase Order in exclusion of all other Courts. However, jurisdiction of any other court may be accepted by mutual discussion and agreement by and between the Company and the Supplier.


36. ARIBITRATION

Disputes, if any, that may arise between the parties in any of the matter connected herein shall be mutually discussed and amicably settled, failing which the same will be referred to a sole arbitrator to be appointed by BEML Limited and the proceedings shall be in accordance with the provisions of the Arbitration & Condition Act, 1996 and the rules framed there under and modified or amended from time to time. The Arbitration proceedings shall be conducted in English language and the Arbitration proceedings will be held in Mysore City only.

Sd/-

Dy. General Manager (Materials)


Signature of Contractor with Seal

	ENGINE DIVISION	WORK CENTER / STG / SUB STG NO	ENGINE MODEL / APPLICATION	STG / SUB STG DESCRIPTION	OPERATIONS DESCRIPTION
	PROCESS SHEET	294901	ALL MODELS (FOR ENGINES TO BE FITTED ON ORIGINAL EQUIPMENT)		PRIMER COATING

OPR NO.	OPERATION DESCRIPTION SUB ASSEMBLY / MOUNTING	SSA CODE	AS	IND	PARTS ASSEMBLED			QTY	TORQUE IN Kgm	TOOL/FIXTURE		INSPECTION	AMENDMENT
					PART DESCN.	PART NO.	BEML P/N			DESCRIPTION	NUMBER		
010	<p>NOTE: Cleaning of engine.(Engine will be received in washed condition at final assy shop). Primer coating of engine shall be carried out after final testing & final assembly of engines.However 'Muffler' will be assembled only after primer painting.</p> <p>PREPARATION OF PRIMER COATING:</p> <p>1. Masking of parts not requiring primer coating. Following parts shall be masked using polythene sheets.</p> <ul style="list-style-type: none"> - All hoses. - Blowby tube. - Lub oil filter catridges,Fuel filter, Water seperator, Centrifugal oil filter - Alternator belts and fan belts. - Starter motor assembly. - Hour meter / Service meter. - APS (Auto Priming System) wiring socket. - APS Fuel Shut off valve handle. - Thermostat housing air vent elbow. - All Sensors (on Water manifold,Lube oil filter,Oil pan,Main gallery & FWH) <p>2. Masking of parts/areas by grease application</p> <ul style="list-style-type: none"> - All name plates - Air cleaner rubber beading - APS rubber boot <p>3. Closing of ports & machined surfaces by plastic caps should be ensured in the following order.</p> <ul style="list-style-type: none"> - Air cleaner duct - Turbo charger / Exhaust Outlet - Water pump inlet & outlet - Oil cooler inlet - Thermo housing Outlet. - PTO Oil charging point - Flywheel housing outside machined surface. 												

REF :


APPROVED BY								PROCESS SHEET NO.	PS-PC-010	TOTAL TIME	
CHECKED BY								ISSUE STATUS	01	SETUP TIME	
PREPARED BY								SHEET NO.	1 OF 3		
	SIGNATURE	DATE	AMEND.NO.	APPROVED BY	DATE	AMEND.NO.	APPROVED BY	DATE			

 Engine Division	ENGINE DIVISION	WORK CENTER / STG / SUB STG NO	ENGINE MODEL / APPLICATION	STG / SUB STG DESCRIPTION	OPERATIONS DESCRIPTION
	PROCESS SHEET	294901	ALL MODELS (FOR ENGINES TO BE FITTED ON ORIGINAL EQUIPMENT)		PRIMER COATING

OPR NO.	OPERATION DESCRIPTION SUB ASSEMBLY / MOUNTING	SSA CODE	AS	IND	PARTS ASSEMBLED			QTY	TORQUE IN Kgm	TOOL/FIXTURE		INSPECTION	AMEND MENT
					PART DESCPN.	PART NO.	BEML P/N			DESCRIPTION	NUMBER		
020	<p>PROCEDURE FOR PRIMER COATING</p> <ul style="list-style-type: none"> - Primer paint to be used shall be polyurethane zinc phosphate primer-golden yellow as per company standard C6001-53 (Latest issue). - Mix the base and hardener thoroughly in the manufacturer recommended ratio i.e. 4:1 (by Vol). Mixture must be free from setting. Allow 30 min for curing. - Mix the primer after adding thinner to company standard C6001-47 (latest issue) thoroughly. - Viscosity of the mixture shall be 25 - 30 sec. (Ratio of primer to thinner is 4:1 by volume) <p>Ensure the following while application of primer:</p> <ul style="list-style-type: none"> - Spray pressure of 2.5 Kg/Sq cm. - Spray gun operating speed of 40 cm/s. - Distance between Gun and specimen 200 - 250 mm (approx) <p>For application of primer, refer company standard PR1031-C & PR1006-C</p> <ul style="list-style-type: none"> - Spray paint the engine in the painting booth to have a dry film thickness of 30 - 40 microns as per std PR1031-C & PR1006-C (latest issue). - Allow the primer to dry as mentioned below, Drying time : Surface Drying - 20 to 40 minutes, hard dry - 8 hours max. <p>Note: Refer Process Qualifying and monitoring sheet PQ-PS-P-20/21 for process monitoring parameters and qualifying of the process.</p>												

APPROVED BY										PROCESS SHEET NO.		PS-PC-010		TOTAL TIME	
CHECKED BY										ISSUE STATUS		01		SETUP TIME	
PREPARED BY										SHEET NO.		2 OF 3			
SIGNATURE		DATE	AMEND.NO.	APPROVED BY		DATE	AMEND.NO.	APPROVED BY		DATE					


REF :

	ENGINE DIVISION	WORK CENTER / STG / SUB STG NO	ENGINE MODEL / APPLICATION	STG / SUB STG DESCRIPTION	OPERATIONS DESCRIPTION
	PROCESS SHEET	294901	ALL MODELS (FOR ENGINES TO BE FITTED ON ORIGINAL EQUIPMENT)		PRIMER COATING

OPR NO.	OPERATION DESCRIPTION SUB ASSEMBLY / MOUNTING	SSA CODE	AS	IND	PARTS ASSEMBLED			QTY	TORQUE IN Kgm	TOOL/FIXTURE		INSPECTION	AMENDMENT
					PART DESCRPN.	PART NO.	BEML P/N			DESCRIPTION	NUMBER		
030	DEMASKING - Demask all polythene and grease covered parts. (Note: Retain Plastic caps as they are on the engine) - Apply red paint on grease nipples, oil filler cap, dipstick gauge head, oil drain plug & water drain plug using brush after wiping with suitable degreasing agent. - Cover the complete engine with Polythene cover.												

APPROVED BY										PROCESS SHEET NO.	PS-PC-010	TOTAL TIME	
CHECKED BY										ISSUE STATUS	01	SETUP TIME	
PREPARED BY										SHEET NO.	3 OF 3		
SIGNATURE	DATE	AMEND.NO.	APPROVED BY	DATE	AMEND.NO.	APPROVED BY	DATE						


REF :

	ENGINE DIVISION	WORK CENTER / STG / SUB STG NO	ENGINE MODEL / APPLICATION	STG / SUB STG DESCRIPTION	OPERATIONS DESCRIPTION
	PROCESS SHEET	294901	ALL MODELS (FOR ENGINES TO BE SUPPLIED TO MKTG & FLOAT ENGINES)		PRIMER & FINISH PAINTING

OPR NO.	OPERATION DESCRIPTION SUB ASSEMBLY / MOUNTING	SSA CODE	AS	IND	PARTS ASSEMBLED			QTY	TORQUE IN Kgm	TOOL/FIXTURE		INSPECTION	AMENDMENT
					PART DESCPN.	PART NO.	BEML P/N			DESCRIPTION	NUMBER		
010	<p>NOTE: Cleaning of engine.(Engine will be received in washed condition at final assy shop). Primer coating of engine shall be carried out after final testing & final assembly of engines.However 'Muffler' will be assembled only after primer painting.</p> <p>PREPARATION OF PRIMER COATING:</p> <p>1. Masking of parts not requiring primer coating. Following parts shall be masked using polythene sheets.</p> <ul style="list-style-type: none"> - All hoses. - Blowby tube. - Lub oil filter catridges,Fuel filter, Water seperator, Centrifugal oil filter - Alternator belts and fan belts. - Starter motor assembly. - Hour meter / Service meter. - APS (Auto Priming System) wiring socket. - APS Fuel Shut off valve handle. - Thermostat housing air vent elbow. - All Sensors (on Water manifold,Lube oil filter,Oil pan,Main gallery & FWH) <p>2. Masking of parts/areas by grease application</p> <ul style="list-style-type: none"> - All name plates - Air cleaner rubber beading - APS rubber boot <p>3. Closing of ports & machined surfaces by plastic caps should be ensured in the following order.</p> <ul style="list-style-type: none"> - Air cleaner duct - Turbo charger / Exhaust Outlet - Water pump inlet & outlet - Oil cooler inlet - Thermo housing Outlet. - PTO Oil charging point - Flywheel housing outside machined surface. 												

REF :


APPROVED BY									PROCESS SHEET NO.	PS-PC-020	TOTAL TIME	
CHECKED BY									ISSUE STATUS	01	SETUP TIME	
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 Engine Division	ENGINE DIVISION	WORK CENTER / STG / SUB STG NO	ENGINE MODEL / APPLICATION	STG / SUB STG DESCRIPTION	OPERATIONS DESCRIPTION
	PROCESS SHEET	294901	ALL MODELS (FOR ENGINES TO BE SUPPLIED TO MKTG & FLOAT ENGINES)		PRIMER & FINISH PAINTING

OPR NO.	OPERATION DESCRIPTION SUB ASSEMBLY / MOUNTING	SSA CODE	AS	IND	PARTS ASSEMBLED			QTY	TORQUE IN Kgm	TOOL/FIXTURE		INSPECTION	AMEND MENT
					PART DESCPN.	PART NO.	BEML P/N			DESCRIPTION	NUMBER		
020	<p>PROCEDURE FOR PRIMER COATING</p> <ul style="list-style-type: none"> - Primer paint to be used shall be polyurethane zinc phosphate primer-golden yellow as per company standard C6001-53 (Latest issue). - Mix the base and hardener thoroughly in the manufacturer recommended ratio i.e. 4:1 (by Vol). Mixture must be free from setting. Allow 30 min for curing. - Mix the primer after adding thinner to company standard C6001-47 (latest issue) thoroughly. - Viscosity of the mixture shall be 25 - 30 sec. (Ratio of primer to thinner is 4:1 by volume) <p>Ensure the following while application of primer:</p> <ul style="list-style-type: none"> - Spray pressure of 2.5 Kg/Sq cm. - Spray gun operating speed of 40 cm/s. - Distance between Gun and specimen 200 - 250 mm (approx) <p>For application of primer, refer company standard PR1031-C & PR1006-C</p> <ul style="list-style-type: none"> - Spray paint the engine in the painting booth to have a dry film thickness of 30 - 40 microns as per std PR1031-C & PR1006-C (latest issue). - Allow the primer to dry as mentioned below, Drying time : Surface Drying - 20 to 40 minutes, hard dry - 8 hours max. <p>Note: Refer Process Qualifying and monitoring sheet PQ-PS-P-20/21 for process monitoring parameters and qualifying of the process.</p>												

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 Engine Division	ENGINE DIVISION	WORK CENTER / STG / SUB STG NO	ENGINE MODEL / APPLICATION	STG / SUB STG DESCRIPTION	OPERATIONS DESCRIPTION
	PROCESS SHEET	294901	ALL MODELS (FOR ENGINES TO BE SUPPLIED TO MKTG & FLOAT ENGINES)		PRIMER & FINISH PAINTING

OPR NO.	OPERATION DESCRIPTION SUB ASSEMBLY / MOUNTING	SSA CODE	AS	IND	PARTS ASSEMBLED			QTY	TORQUE IN Kgm	TOOL/FIXTURE		INSPECTION	AMEND MENT
					PART DESCPN.	PART NO.	BEML P/N			DESCRIPTION	NUMBER		
030	<p>PROCEDURE FOR FINISH PAINTING:</p> <ul style="list-style-type: none"> - Finish paint to be used shall be Poyurethane Finish paint - Golden yellow company standard C6001-45 (latest issue). - Mix the base & Hardener thoroughly in the manufacturer recommended ratio of 4:1 (by vol). Allow it for 30 mins for curing. - Mix the paint after adding thinner to company standard C6001-47 (latest issue) thoroughly. - Viscosity of the mixture shall be 25-30 sec. Ratio of paint to thinner = 4:1 (by Volume). - Use the mix within 2 hours.(Pot life of mix is only 2 hours). <p>Ensure the following while application of finish paint:</p> <ul style="list-style-type: none"> - Spray pressure of 2.5 Kg/Sq cm. - Spray Gun operating speed 40 cm/s. - Distance between Gun and specimen 200 - 250 mm (approx). <p>For application of finish paint, refer company standard PR1032-C & PR1006-C.</p> <ul style="list-style-type: none"> - Spray paint the engine in the painting booth to have a dry film thickness of 30-40 microns. - Allow the paint to dry as below: Surface Dry - 20 to 40 minutes & Hard dry - 8 hours max. <p>Note: Refer Process Qualifying and Monitoring Sheet PQ-PS-P-020/030 for process monitoring parameters & qualifying of the process.</p>												

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	ENGINE DIVISION	WORK CENTER / STG / SUB STG NO	ENGINE MODEL / APPLICATION	STG / SUB STG DESCRIPTION	OPERATIONS DESCRIPTION
	PROCESS SHEET	294901	ALL MODELS (FOR ENGINES TO BE SUPPLIED TO MKTG & FLOAT ENGINES)		PRIMER & FINISH PAINTING

OPR NO.	OPERATION DESCRIPTION SUB ASSEMBLY / MOUNTING	SSA CODE	AS	IND	PARTS ASSEMBLED			QTY	TORQUE IN Kgm	TOOL/FIXTURE		INSPECTION	AMENDMENT
					PART DESCRPN.	PART NO.	BEML P/N			DESCRIPTION	NUMBER		
040	DEMASKING - Demask all polythene and grease covered parts. (Note: Retain Plastic caps as they are on the engine) - Apply red paint on grease nipples, oil filler cap, dipstick gauge head, oil drain plug & water drain plug using brush after wiping with suitable degreasing agent. - Cover the complete engine with Polythene cover.												

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