To;

The HoD ,ECL
The Automotive Research Association of India
Vetal Hill, off Paud Road, Kothrud,
Pune 411038

OR

The Automotive Research Association of India P. B. No. 832, Pune - 411 004.

ARAI-HTC Chakan Tel no. 02135-396 834

ARAI Kothrud Pune Tel no: (020) 3023 1273 /

75 / 61

Fax: (020) 30231104

ANNEXURE – 3 LETTER ADDRESSED TO THE PARTICIPANTS GIVING DETAILS OF LODGING/ BOARDING AND TRANSPORT ARRANGEMENT

Dear Participant,

It gives us great pleasure to welcome you to the Workshop on 'Preparedness For Forthcoming BS –VI Implementation and Emission Certification As Per BS-IV For 2,3 & 4 Wheelers

Kindly note the points mentioned below,

1. The Workshop will be held **at Puri**, **Odisha** for transport department officials.

The Venue for workshop will be informed to the concerned participants in due course of time.

2. The Course will cover topics on Emission Standards & Measurement techniques for vehicles & Automotive heavy duty engines up to BS IV with advancement in technology , Auto Fuel Policy & BS –VI Norms, Marching towards –VI ,its key factors & Compliance approach, PUC procedure

This workshop also include hands on sessions for Demonstration of PUC testing on vehicles

3. Letter addressed to the Participants giving details of lodging/boarding and transportation for the Workshop/Training.

Same will be informed to the concerned participants.

4. In case you need any help kindly contact the following ARAI officials.

·ARAI Office Hours: 8.30 am to 5.00 pm (Monday to Friday) ·ARAI-HTC Chakan Tel no. 02135-396 834/32

ARAI Kothrud Pune 020-3023 1275/ 73 / 61

Contacts details during office /after office hours

Mr. S.S.Ramteke ,Cell : 07709007939/02135-396 834/32

Dr. H .A. Nakhawa ,Sr.Dy. Director, 020 30231275,

Cell: 9860888075/7774012156

K. Srinivas, Sr. Dy. Director, 020 3023 1273 /

Res: 020 25395909, Cell-9975581045

Mr. R. S. Khole, 020 3023 1261, Res: 020 25232823

The Course starts at 9.30 am everyday.

Looking forward to meet you during the Workshop.

With Regards, **Dr H A Nakhawa**

Sr. Dy. Director ,ECL

Email:- nakhawa.ecl@araiindia.com

K. Srinivas

Sr.Dy. Director & HoD ECL

srinivas.ecl@araiindia.com



INFORMATION BOOKLET

WORKSHOP- CUM-TRAINING PROGRAMME ON 'PREPAREDNESS FOR FORTHCOMING BS –VI IMPLEMENTATION AND EMISSION CERTIFICATION AS PER BS-IV FOR 2,3 & 4 WHEELERS' 12th – 14th Feb. 2019

Conducted by

The Automotive Research Association of India(ARAI)

S . No.102 Vetal Hill, Off Paud Road , Kothrud , Pune 411038 Tel. No.:02135-396 834, 020 -30231275/73/61 Fax No.020-30231104

Email:director@araiinidia.com

1.BRIEF ABOUT ARAI

The Automotive Research Association of India (ARAI) located at Pune in Maharashtra is a premier autonomous institute setup by Indian Automotive Industries. The institute is engaged in Research and Development activities for training to Automotive Industry. ARAI is affiliated with the Ministry of Heavy Industry and Public Enterprise, Government of India. ARAI is an Approved Test Laboratory for Type Approval of vehicles and components under Central Motor Vehicle Regulations (CMVR).

ARAI has expertise in the following fields.

- Emission control, Engine design and Alternative Fuels
- Noise, Vibration and Harshness
- iii) Automotive Materials
- iv) Structural Dynamics
- v) Vehicle Engineering and Evaluation
- vi) Active and Passive Safety
- vii) Auto Electricals

Our address is given below:

The Automotive Research Association of India (A.R.A.I.)

S. No. 102, Vetal Hill, Off Paud Road, Kothrud,

PUNE 411 038 (INDIA)

Tel No.: 02135-396 834/32,20-3023 1275/73/61

Fax No.: 020-30231104

Email: director@araiindia.com

Web site: http://www.araiindia.com

2. COURSES OFFERED BY ARAI

Training to Motor Transport Department Personnel on

'Preparedness For Forthcoming BS -VI Implementation and Emission Certification As Per BS-IV For 2,3 & 4 Wheelers' **CONTENTS OF THE COURSE**

Course contents for training on 'Preparedness For Forthcoming BS -VI Implementation and Emission Certification As Per BS-IV For 2,3 & 4 Wheelers' are given in Annexure - 1 enclosed herewith.

TARGET GROUP

Officers from Motor Transport Department of various state transport authorities

5. FACULTY

Senior executives from ARAI.

BOARDING AND LODGING FACILITIES

Letter addressed to the Participants giving details of lodging/ boarding and transportation for the Workshop/Training is enclosed at Annexure-3.

7. A SELF-CONTAINED, SELF-ADDRESSED PROFORMA (PERFORATED), TO BE FILLED UP BY VARIOUS STATES / U.T.s AND SENT TO ARAI FOR NOMINATING THE TRAINEES. Enclosed at Annexure-2 herewith.

SCHEDULE FOR TRAINING

12th to 14th Feb. 2019

COST

The training programme is sponsored by the Ministry of Road Transport and Highways, New Delhi (MoRTH) and as such its cost is to be borne by the MoRTH.

TA/ DA pertaining to the officers participating in the training programmes is to be borne by respective States/U.T.s.

ANNEXURE - 1

COURSE CONTENTS OF THE TRAINING MODULE ON 'Preparedness For Forthcoming BS -VI Implementation and Emission Certification As Per BS-IV For 2,3 & 4 Wheelers' (Module duration – 3 Days)

Following topics will be covered in detail during the theory / practical sessions of the Workshop.

- Emission Scenario in India & across the globe
- History of pollution control in India
- Emission control Programme in India (On & Off road Applications)
- CMVR Regulations Automotive emission
- Emission Norms & vehicle technology evaluation in India
- Euro III, IV, V, VI Norms across the globe. Technology for clean vehicles - Technology option for GHG
- reduction
- Emission standards & Measurement techniques for vehicles up to BS IV with advancement in vehicle technology
- -Source of Automobile emission & their health effects -Emission Std. & Measurement techniques, Evolution of
- emission regulations in India with advancement in vehicle technology
- -Equipment & their importance in emission setup-Type I & II test -Crank case/Evaporative emission test/Durability /Alternate Type V test to Evaluate D.F.
- -Type VI- Cold CO & HC emission test & OBD test
- Emission standards & Measurement tech, for automotive Heavy duty engines up to BS IV with advancement in engine technology
- -Different emission tests applicable Existing & Future
- -Engine performance test, Emission test procedure and different test, OBD need, test criteria and limits for BS-IV.

ECE R-49/ESC/ETC/ELR and 13 mode mass emission calculation.

- **Auto Fuel Policy and Bharat Stage VI Norms**
- Marching towards Bharat Stage -VI: Key Factors and **Compliance Approach**
- **PUC Procedure**

Overview of PUC, working principles of smoke meter and 4 gas analyser, Requirements& test procedure for free acceleration test and idle CO-HC test

- Demonstration of PUC testing.
 - Industrial Visit (Nearest available industries)

ANNEXURE - 2

(Proforma to be filled up by the respective States / U.T. s. of the Workshop Participant)

Name of the participant
2. Address for correspondence
3. Fax number
4. Tel number of office as well as residence
5. Professional qualification
6.Brief details of experience
7. Details of earlier training undergone on this subject, if any
8. Familiarity with the CMVR requirements
9. Area of special interest, if any specific problem/issue which you would like to discuss

10 Whether you need accommodation YES / NO