

MORNING SESSION( 8:30 Hrs to 12:00 Hrs)		
1st Day	ME/121	Different type of wagon -Wagon body & under frame.
		Latest design wagon like BOXNHL BLC etc. HUCK BOLTING.
	ME/045	Periodicity of ROH/POH.
	ME/126	SPECIAL FEATURE OF EACH TYPE OF WAGON.

AFTERNOON SESSION( 13:30 Hrs to 16:30 Hrs)		
1st DAY	ME/070	1. TYPE OF CASNUB BOGIE
		2. COMPONENTS OF CASNUB BOGIE.
		3. SUSPENSION SYSTEM OF CASNUB BOGIE.
	ME/130	4.SALIENT FEATURE OF CASNUB BOGIE.

## Types of Wagon

- **Open type** – BOXN,BOXNHS,BOXNHA,BOXNCR,BOST,BOSTHS,BOXNLW,BOXNHL,BOXNAL,BOY-25,BOXN-25,BOBSN-25
- **Closed type** – BCN,BCNA,BCNAHS, BCNHL.
- **Hopper type** – BOBR,BOBRN,BOBYN,BOBRNAL, BOBRN-25
- **Flat type** – BRN,BFNS,BFKI,BOXKH,BLC etc.
- **Tank type** – BTPN,BTPGLN, etc.
- **Brake Van** – BVZC, BVZI



HUCK BOLTING

The various bogie versions developed are as under:

- CASNUB -22W
- CASNUB -22W (Retrofitted)
- CASNUB -22W(M)
- CASNUB -22NL
- CASNUB NLM
- CASNUB -22NLB
- CASNUB -22HS

The CASNUB bogie assembly consists of the following components:

- i. Wheel set with Cartridge Bearing
- ii. Adapter, retainer bolt & side frame key assembly
- iii. Side frames with friction plates
- iv. Bolster with wear liners
- v. Spring plank, fit bolts & rivets
- vi. Load bearing springs and snubber springs
- vii. Friction shoe wedges
- viii. Centre pivot arrangement comprising of Centre pivot top, Centre pivot Bottom, Centre pivot pin, Centre pivot retainer & locking arrangement
- ix. Side Bearers
- x. Elastomeric Pad
- xi. Bogie Brake Gear
- xii. Brake Beam

**MORNING SESSION (8:30 Hrs. to 12:00 Hrs.)**

2nd DAY	ME/015	Knowledge of different type of coaches. Type of coaching Bogies-ICF, FIAT , Passenger amenities and safety Items
	ME/045	PERIODICITY OF IOH/ POH

**AFTERNOON SESSION (13:30 Hrs. to 16:30 Hrs.)**

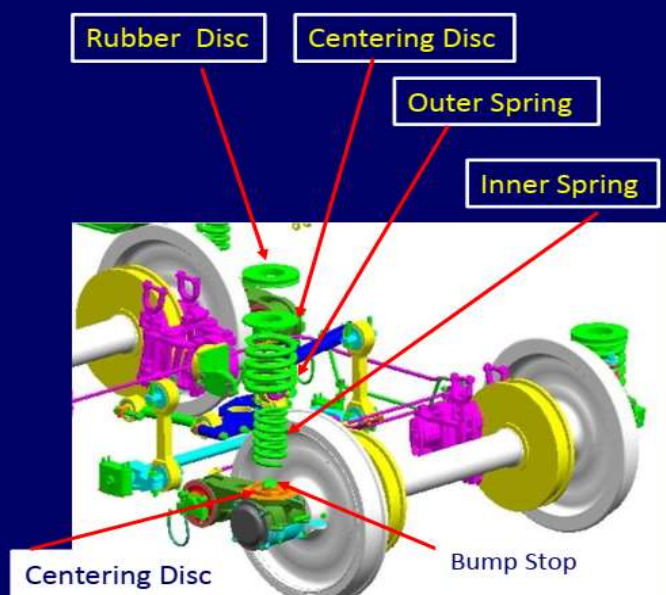
2nd DAY	ME/090	BIO TOILET
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# Comparison of FIAT with ICF Bogie

Features	FIAT	ICF
Speed Potential (kmph)	160	140
Ride Index (max.)	2.75 at 180kmph	3.5 at 140kmph
Weight (t)	6.5	5.72 (13t) 6.5(16.25t)
Wheel base(mm)	2560	2896
Inner axle distance (m)	12.34	11.89
Wheel dia new (mm)	915	915
Wheel dia wom (mm)	845	825
Axle box guidance	Articulated	Rigid
Dampers – Primary	Hydraulic damper	Dashpot

## Primary Suspension (FIAT Bogie)

- ❑ Nested steel coil springs.
- ❑ Control arm axle guidance.
- ❑ Lateral flexibility-reduced wheel root wear.
- ❑ Bump stop (rubber spring) over steel spring.
- ❑ Hydraulic dampers.

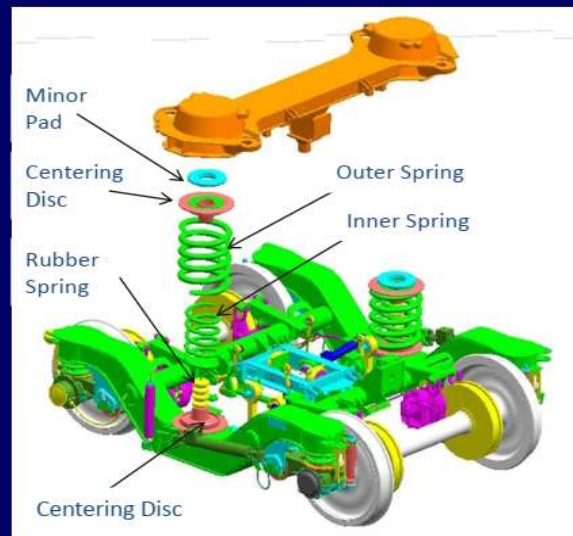




# Secondary Suspension (FIAT Bogie)

## ❑ Consists of

- ❖ Nested flexi-coil steel spring.
- ❖ Minor pads
  - Helps the two bogies to align equally.
- ❖ Rubber spring
  - Inside coil springs for progressive characteristic.



**MORNING SESSION (8:30 Hrs. to 12:00 Hrs.)**

3rd DAY	ME/088	BRAKE GAER EXAMINATION, REPAIR & Adjustment.
	ME/127	Maintenance requirement of equipment for Air Brake System

**AFTERNOON SESSION (13:30 Hrs. to 16:30 Hrs.)**

3rd DAY	ME/084	Air Brake Equipment , Overhauling & testing
		Revision of critical maintenance practice.

**MORNING SESSION (8:30 Hrs. to 12:00 Hrs.)**

4th DAY	ME/060	Maintenance of high speed train- Shatabdi.Janashatabdi.Rajdhani.including LHB coaches
	ME/052	RPC(IV)

**AFTERNOON SESSION (13:30 Hrs. to 16:30 Hrs.)**

4th DAY	ME/55	Trouble shooting during Train operation, Brake binding,Pressure trouble



**MORNING SESSION (8:30 Hrs. to 12:00 Hrs.)**

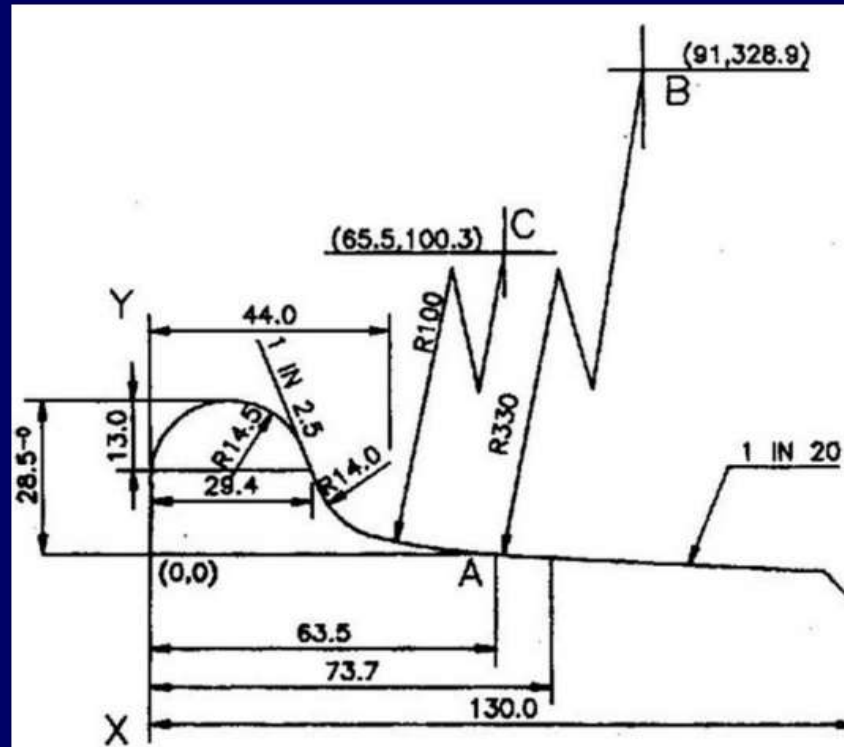
5th DAY	ME/133	Wheel Changing, Replacing, Spring changing, Wheel Profile and rejectable defect

**AFTERNOON SESSION (13:30 Hrs. to 16:30 Hrs.)**

5th DAY	ME/125	Roller Bearing Maintenance, Dismantling ,Detection of Roller Bearing Deffect,
	ME/129	CTRB, Detection deffect

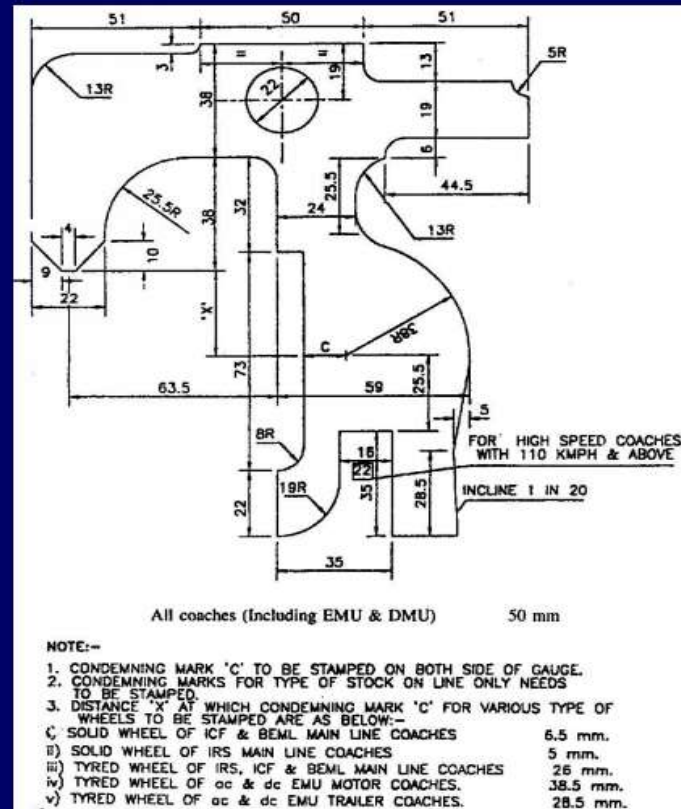
# Wheel Tyre Profile

- ❑ Standard wheel profile
- ❑ Worn wheel profile (Conforming profile)
- ❑ No Intermediate profile now.



# Wheel Profile Defects

- ❑ Flat tyre
- ❑ Hollow tyre
- ❑ Sharp flange
- ❑ False flange
- ❑ Deep flange
- ❑ Thin flange
- ❑ Root radius



**MORNING SESSION (8:30 Hrs. to 12:00 Hrs.)**

6th DAY	ME/055	Focus on prevailing problem-Hot Axle,BOBRN Door operating mechanism

**AFTERNOON SESSION (13:30 Hrs. to 16:30 Hrs.)**

6th DAY	ME/013	Material Handling Equipments ,EOT Crane-Basic Maintenance

**MORNING SESSION (8:30 Hrs. to 12:00 Hrs.)**

7th DAY	ME/002	Knowledge of Disaster Management to Handle Accident Cases
	ME/002	Importance of MOCK DRILL and its practical demonstration

**AFTERNOON SESSION (13:30 Hrs. to 16:30 Hrs.)**

7th DAY		Introduction to Rescue Devices of ART /ARMV/140 T BD Crane used at Accident.

**MORNING SESSION (8:30 Hrs. to 12:00 Hrs.)**

8th DAY		Reconended Visit to Workshop/shed/depot

**AFTERNOON SESSION (13:30 Hrs. to 16:30 Hrs.)**

8th DAY		Reconended Visit to Workhshop/shed/depot

**MORNING SESSION (8:30 Hrs. to 12:00 Hrs.)**

9th DAY	ME/050	Yard Working(ME/050), Rolling in Examination, Intensive Examination

**AFTERNOON SESSION (13:30 Hrs. to 16:30 Hrs.)**

9th DAY	ME/083	Maintenance of Draw Gear , Buffer & Head Stock , CBC & Train Parting .
	ME/053	Attention to CBC .



**MORNING SESSION (8:30 Hrs. to 12:00 Hrs.)**

10th DAY	ME/002	General Safety , Accident and Fire Fighting
	ME/003	Personal Protection Equipment( PPE)

**AFTERNOON SESSION (13:30 Hrs. to 16:30 Hrs.)**

10th DAY	ME/059	Maintenance of Fire Extinguisher

**MORNING SESSION (8:30 Hrs. to 12:00 Hrs.)**

11th DAY	ME/014	Cleaness of Working Environment.Knowledge of 5S, ISO14001, 90001 & 5001.

**AFTERNOON SESSION (13:30 Hrs. to 16:30 Hrs.)**

11th DAY	Sub Module:M E/R1	Knowledge of Environment and Housekeeping Management

**MORNING SESSION (8:30 Hrs. to 12:00 Hrs.)**

12th DAY	ME/001	Workplace Ethiks and its important

**AFTERNOON SESSION (13:30 Hrs. to 16:30 Hrs.)**

12th DAY		Group Discussion and MCQ Test
		Award of training completion certificate and release.