



# Sample Test Project

**District / Zonal Skill Competitions**  
**Skill- Car Painting**

*Category: Transportation & Logistics*

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## Section - A

### *A. Preface*

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#### **Skill Explained:**

Car painters work in various work environments from an Auto body repair shop to an aircraft hangar, are responsible for reinstating the pre-accident paint finish to cars after the structure and/or the panels have been repaired or replaced. They may also be asked to completely repaint a whole vehicle either to change its colour or reinstate its newness. Car painters may also become involved in matching colours to an original colour no longer available or to colours that prove difficult to match. A car painter must match the colour, shade, and texture of the adjoining panels that are not being painted. They can also carry out minor panel repairs and apply undercoats, colour coats, and clear sealant coats which provide the high gloss levels required.

#### **Eligibility Criteria (for IndiaSkills 2018 and WorldSkills 2019):**

Competitors born on or after 01 Jan 1997 are only eligible to attend the Competition.

#### **Total Duration: 2.30 Hrs**

<b>Task A</b>	<b>:</b>	90 Minutes
<b>Task B</b>	<b>:</b>	60 Minutes

## Section - B

### B. Test Project

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#### Task A – Wet on wet Painting on Fender (2 Layer)

##### Competitor Instruction Sheet

You have **90 Minutes** to complete this task

1. Competitor should prepare the Fender for non-sanding primer surface by sanding with required abrasive paper. Once the preparation completed it must be primed with non-sanding primer surface insuring the Dry Film Technology maintained as per Products Technical District Sheet. Further to paint the primed panel Base coat and clear coat must be applied as per standard procedure given in TDS.
2. Competitor will be provided with a new e-coated fender panel to prepare for applying non-sanding primer surface and match the color by applying on the spray card. Paint the panel in vertical position by using standard systems

#### Task B – Colour Matching

##### Competitor Instruction Sheet

You have **60 Minutes** to complete this task

1. Standard Shade panel will be given to the competitor along with Liquid paint sample of missing tints. The competitor has to fine tune the shade and apply on the spray card and submit the pane as per best matched.
2. The competitor will use sample color to identify the missing tints, fine tune the shade and apply on the spray card. After completing the color adjustment, handover the final spray card for evaluation by the jury.

## Section – C

### C. Marking Scheme

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**Marking Scheme:** The Assessment is done by awarding points by adopting two methods, Measurement and Judgments

- Measurement - One which is measurable
- Judgment - Based on Industry expectations

Aspects are criteria's which are judged for assessment.

#### Example-Judgment Marking

If maximum marks for Judgement criteria is 1 and if all 3 Experts (Juries) give 3 points to a candidate, the candidate will get 1 mark for that aspect. If 2 Experts give 3 and 1 Expert gives 2 points, then candidate will get  $(3+3+2)/9*1 = 0.89$  marks for that aspect out of 1 mark.

**The Marking Scheme of the mentioned Tasks is attached in Annexure - 1**

1. Wet on wet Painting on Fender (2 Layer)
2. Task B – Colour Matching

## Section - D

### D. Infrastructure List

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#### **Equipment / Tools:**

1. Paint Booth (Water Borne Compatible)
2. Infra-Red Dryer
3. Dust Extraction Sanding Machine: 3M , Mirka
4. Hand Blocks & Abrasive: 3m, Mirka
5. Spray Guns (SATA)
6. Spray Gun cleaning unit
7. Stands for Paintings
8. Table for work stations
9. SATAjet 5000 B RP 1.3 Standard
10. SATAjet 5000 B HVLP 1.3 Standard
11. Nozzle set SATAjet 100 B RP 1.4
12. Pressure Gauge
13. SATA RPS Cups 0.6 L - 200 Mic/3M PPS
14. Spray Gun Coupler

#### **Paint material:**

1. Degreasers
2. Non-sanding Primer Surfacer
3. Hardener for Primer surfacer
4. 2K Thinner
5. Water borne Base coat tints & Binder (Prepared Colour)
6. Fast drying Clear Coat
7. Hardener for Clear coat
8. Gun Cleaning thinner

## Section – E

### E. Instructions for candidates

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1. Candidate must wear the prescribed Personnel Clothing while performing the task and ensure safety of equipment and personnel's working around his workstation.
2. The Competitor must use the following Personal Protective Equipment:
  - Dust Protection mask;
  - Solvent resistant Gloves;
  - Safety glasses;
  - Ear protection;
  - Safety shoes
  - Dust free overall with hood
  - Solvent Vapor Resistant mask
  - Safety measures have to be taken at the workstation (extractors for dry sanding and spraying);
  - Safety procedures must relate to the paint sponsors data sheets
3. Candidate should remain present at the Competition venue 30 min before start of work
4. Each candidate would be allotted a specific time to complete the task, no further extension would be given to anyone unless specified by Jury.
5. Candidates must follow the instructions given by Jury.
6. Candidate must dispose-off the environmentally harmful products carefully.
7. Candidate must adhere to the MSDS (Material Safety Data Sheets) provided by the paint manufacturer.
8. In case of any difficulty the candidate must seek support of Jury members.

## Section – F

### F. Health, Safety, and Environment

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1. All accredited participants, and supporting volunteers will abide by rules and regulations with regards to Health, Safety, and Environment of the Competition venue.
2. All participants, technicians and supporting staff will wear the required protective personnel clothing.
3. All participants will assume liability for all risks of injury and damage to property, loss of property, which might be associated with or result from participation in the event. The organizers will not be liable for any damage, however in case of Injury the competitor will immediately inform the immediate organizer for medical attention.



## Annexure -1

**Skill Name:** Car Painting

**Competitor Name:** \_\_\_\_\_

Task	Criteria				Marks
A	Wet on wet paint application				50.00
B	Color matching				50.00
<b>Grand Total</b>					<b>100.00</b>
Aspect Type M = Meas J = Judg	Aspect - Description	Judg Score	Extra Aspect Description (Meas or Judg) OR Judgement Score Description (Judg only)	Requirement or Nominal Size (Measurement Only)	Max Mark
M	Panel cleaned correctly		Clean with silicone remover	Yes or no	2.00
M	Panel scuffing done correctly		No shiny area (Deduct 0.25 marks if cut more than 10 mm)	Tolerance	2.00
M	Panel scuffing done correctly		No cuts (Deduct 0.25 marks if cut more than 5X5 mm)	Tolerance	2.00
M	Wet on wet nonsanding applied correctly		Covered correctly (No area left)	Yes or no	4.00
M	Basecoat free of mottle / banding		0- There are visible imperfections from 2meters away in 5 seconds		4.00
			1- no visible imperfections from 2 meters away in 5 seconds		
			2- no visible imperfections from 1 meter away in 5 seconds		
			3- no visible imperfections from 30cms away in 10 seconds		
M	Basecoat cover all over?		Deduct 0.50 per area shown by Experts if poor hiding		8.00
M	Colour match. See standard from card given. Experts make standard before competition		Compare the spray card with fender Painted = Deduct 1 Marks if it blendable match)	Tolerance	8.00
M	Correct film thikness?		In between 120-160 my, 110-170 my = 0,50p	Tolerance	4.00
J	Wet on wet nonsanding applied correctly				4.00
		0	There are visible imperfections from 2meters away in 5 seconds		
		1	no visible imperfections from 2 meters away in 5 seconds		

		2	no visible imperfections from 1 meter away in 5 seconds		
		3	no visible imperfections from 30cms away in 10 seconds		
J	Basecoat free of other imperfections				4.00
		0	There are visible imperfections from 2meters away in 5 seconds		
		1	no visible imperfections from 2 meters away in 5 seconds		
		2	no visible imperfections from 1 meter away in 5 seconds		
		3	no visible imperfections from 30cms away in 10 seconds		
J	Clearcoat applied correct?				8.00
		0	There are visible imperfections from 2meters away in 5 seconds		
		1	no visible imperfections from 2 meters away in 5 seconds		
		2	no visible imperfections from 1 meter away in 5 seconds		
		3	no visible imperfections from 30cms away in 10 seconds		
M	Correct basecoat applied to spraycart?		Basecoat not covered -0,10 other defect -0,10	Tolerance	10.00
M	Correct Clearcoat applied to spraycart?		Clear coat defect on the spray panel	Yes or no	10.00
J	Matching colour to standard given the missing tinter				20.00
		0	From all angles clear colour difference or understand task		
		1	Slight colour difference on 2 angles		
		2	Slight colour difference on 1 angle		
		3	No colour difference (edge to edge)		
					10.00
			Safety Followed		