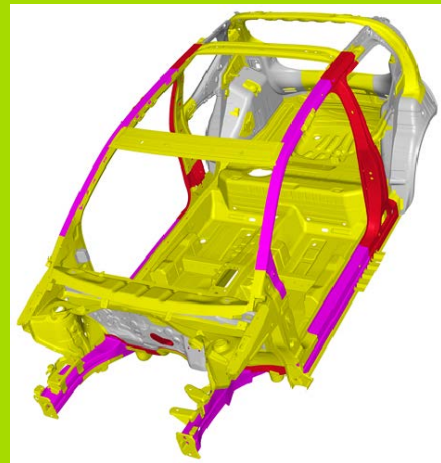


# TEST PROJECT AUTOBODY REPAIR

WSC2015\_TP13\_pre\_EN



Submitted by: Chief Expert  
Name: Kjell Arild Orheim  
Member country/region: Norway





# CONTENTS

This Test Project consists of the following documentation/files:

1. WSC2015\_TP13\_BR\_pre\_EN.doc



## INTRODUCTION

All Competitors will be tasked to demonstrate a range of skills in Autobody Repair. There should be at least five (5) different project modules to include but not limited to the following: Diagnosis and Correction, Structural Part Replacement, Non-Structural Part Replacement, Panel Repairs, Autobody related repairs such as/but not limited to electrical diagnoses, plastic repair, and/or glass replacement.



## DESCRIPTION OF PROJECT AND TASKS

Content and marks distribution:

Module A	Diagnosis and Correction	20%
Module B	Structural Part Replacement	35%
Module C	Non-Structural Part Replacement	25%
Module D	Panel Repair	15%
Module E	Autobody related repairs such as but not limited to -electrical diagnoses	5%
	TOTAL:	100%



# INSTRUCTIONS TO THE COMPETITOR

**These Competitor instructions must be read in conjunction with the following documents:**

1. Current version of Technical Description.
  2. Current version of Competition Rules A and B.
  3. Current version of Health, Safety and Environment policy and guidelines document
  4. Volkswagen Up! Body Repair Manual and Volkswagen Tiguan SRS repair manual
- 
- Certain tasks need to be marked by Experts “while in progress”, these are indicated in your instructions where STOP is shown, proceed with another task while marking takes place.
  - Marks will be forfeited if the competitor overlooks the “in progress marking” by experts.
  - Assistance with the removal and replacement of heavy parts such as doors, bonnet, etc. can be given by any expert other than the one from your country/region. (No help on side panel)

## SAFETY

Competitors could be deducted marks or excluded from the skill competition (as per Competition Rules and Health, Safety and Environment policy and guidelines document) if they are identified working in an unsafe manner or create an unsafe workplace condition.

Examples of unsafe practices include:

- Not wearing the appropriate personal safety equipment, safety glasses, gloves, hearing protection, safety shoes etc.
- Not correctly positioning screens when MIG welding or grinding.
- Not using fume/smoke extractor.
- Realigning without safety cable correctly fitted.
- Poor / unsafe housekeeping.
- Endangering yourself or others.

Reckless or accidental damage caused to equipment or vehicle while performing repairs could result in loss of marks in any or all categories.

## Important!

It is crucial to the end result that you carefully review the task before you start work. The order of the tasks is determined. You begin on the task A, and follow the instructions given at the end of each task. The order will then be A1, A2, C1, B1, and so on. You must always complete each task before moving on to the next task, if not otherwise specified.

Task E has its own timetable determined by drawing lots. (30 min for each competitor)



# DESCRIPTION OF PROJECT AND TASKS

## MODULE A – DIAGNOSIS AND CORRECTION

### MODULE A1 DIAGNOSIS: SET-UP, MEASURE, AND REPORT DAMAGE

- Observe safe work practices at all times.
- Ensure that all the clamps and bench mountings are correctly fitted and tightened.
- Minimum 60Nm and maximum 90 Nm on the four bolts screwed in to the Body ( B297)
- Bench mountings and clamps must be tight, 160 Nm minimum torque. (B248 and B263)
- Remove front “bolt-on” panels.
- Ensure that the measuring bridge/ ladder is correctly fitted and locked in place.
- Start up the Car-o-liner Vision X3 computer and make a new work order.
- The order must be created and saved with your first name, surname and your country
- Select and open data sheet number 21:319, 1 and 2, and 621:270 5
- Set-up and “center” the Car-o-liner measuring system, use measuring point 14R/L, 10R/L and 11 on the left hand side. (setup with 5 centering points)
- Measure and report the extent of misalignment at the following data sheet locations;
- Underbody locations: Left L1, L2, L3, L4, L6, L7, L8, L9  
21:319 1 and 2 Right R1, R2, R3, R4, R6, R7, R8, R9
- Upper body locations: Left L1, L2, L3, L7 , L8, L9 and L10  
621:270 5 Right R1, R3, R4 and R8
- Save data sheet/damage report on computer and print.

#### A1 STOP

Sign in to check your clamps, bench mountings, measuring bridge installation and collect your data sheet/damage report.

After you have listed "ready for assessment A1" continue your work on A2 without any delay.

### MODULE A2 CORRECTION: REPAIR AND REALIGN STRUCTURAL DAMAGE

- Safe work practices must always be adhered to and apply to host country’s regulations.
- Realign the rail members and parts that are not being replaced, to manufacturer’s specifications. (+/-3mm)
- Use safety cable when using pulling equipment. Car-o-liners EVO-system must be correctly used at all times on both sides when pulling.



Measuring point no. Right 7or 9 and Left 7 or 9



- The realignment must not cause additional damage or loss of strength to parts that are not being replaced; due to clamp attachment, EVO-anchoring, and incorrect pulling/pushing.
- Repair and stress relieve the rail members and adjacent panels that are not being replaced.
- All repairs/straightening to parts that are not being replaced are carried out without filler to a standard ready for chemical treatment and primer. (+/- 1mm)
- Car o liner measuring equipment must be protected from damage that may be caused by incorrect use, welding, grinding sparks or other damage.

### A2 STOP

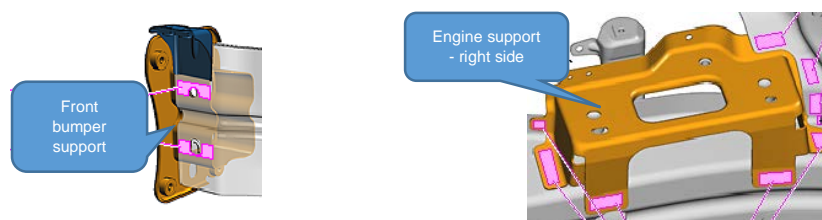
Note: The alignment of the engine compartment, front rail members, damage to parts not being replaced, and measuring equipment (damage) will be checked by experts at the end of the competition.

**Continue to C1 immediately.**

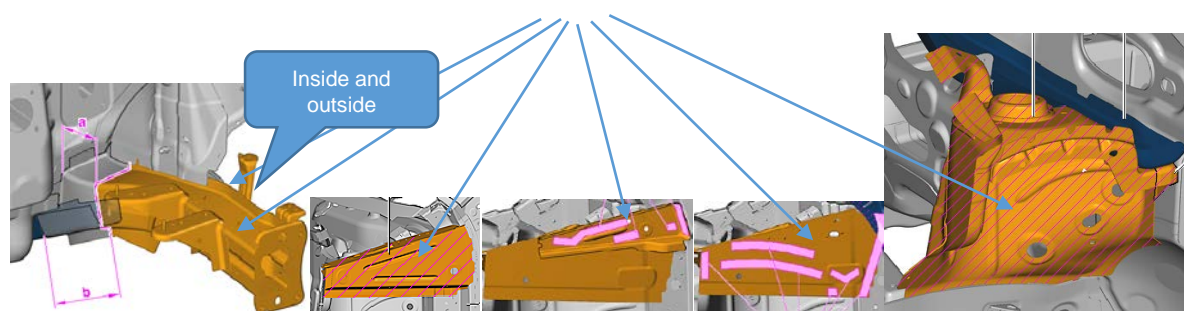
## MODULE B1 STRUCTURAL PART(S) REPLACEMENT

### PANEL REMOVAL AND FIT

- Safe work practices must always be adhered to and apply to host country's regulations.
- Remove all necessary bolt-on panels at the front end of the body
- Remove the following damaged parts on the right hand side:

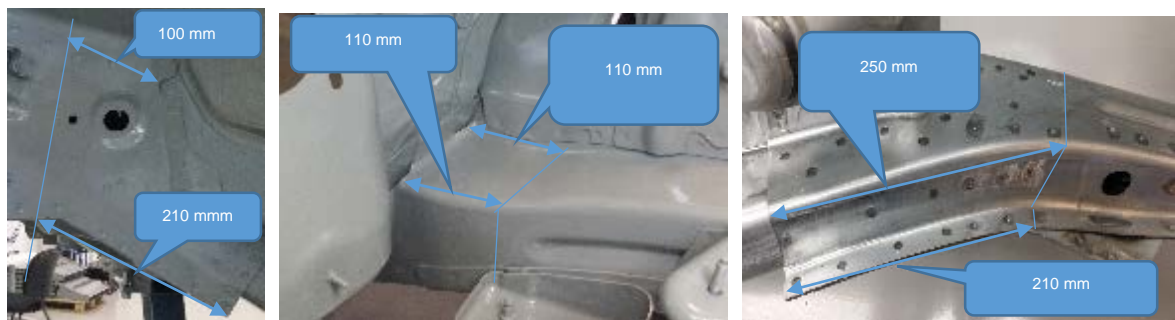


- Remove the following parts on the left hand side





## Cut lines for seam welding



- Cut left hand side front frame according to pictures. Remove the reinforcement.
- Straighten (repair) all distorted flanges and remove all spot weld remnants with grinder or sander. Areas around the tear and holes resulting from damage, must also be ground and cleaned, but not repaired by welding.
- Make all holes for plug-welding 8mm
- Remove all paint from areas for welding on flanges and joints, from the new replacement parts and the body shell in preparation for welding. All 4 or 6 sides for plug and spot welding must be bare metal. Minimum 10mm around a hole for plug-welding and minimum 20mm for spot-welding. For seam-welding 10mm or more inside and outside must be bare metal - where possible.
- Any accidental holes or tears to parts not to be replaced must not be welded until inspection by Experts. If you do - you will lose all the points in this marking area.
- Assemble and fit all the new parts on the left side to body shell, hold in correct position with clamps and EVO. EVO 3 must be used in the measuring-point no L3. No welding or tacking yet. Making extra holes for screws is not allowed. No primer yet. All bolts on the Car-o-liner equipment must be tightened with torque.
- These measuring-points will be checked before experts start marking B1. L3 and L9 will be checked. Tolerance +/- 1mm difference between the measuring points. L/W/H
- The Car-o-Liner X3 must be centred and ready to do the measuring.

### Important information!

#### During B1 marking:

You will be asked to leave your ongoing task to show experts the position of the new parts by using Car-o-liner X3. (+/-1mm)

Experts will disassemble all parts during marking unless you want to do by yourself.

You will also be asked to leave your job to apply primer.

### B1 STOP

Sign in to mark your left side butt joint gaps and fitting of the other parts.

Experts will mark your left & right side parts removal and cleaning, and making of plug weld holes to the body and/or spare parts.

- Proceed to any task and complete the task you choose.
- You will be called for to add primer when the experts are done marking B1

### PRIMER

Apply primer on all surfaces which will be enclosed, while experts assess how the work is performed.

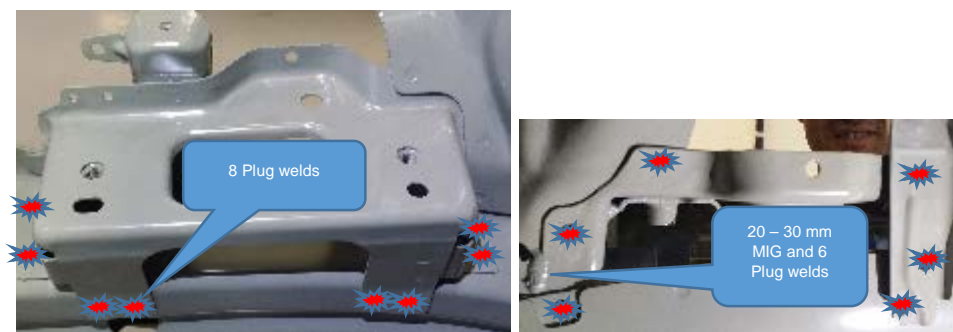




## MODULE B2 FIT AND WELD ALL PARTS

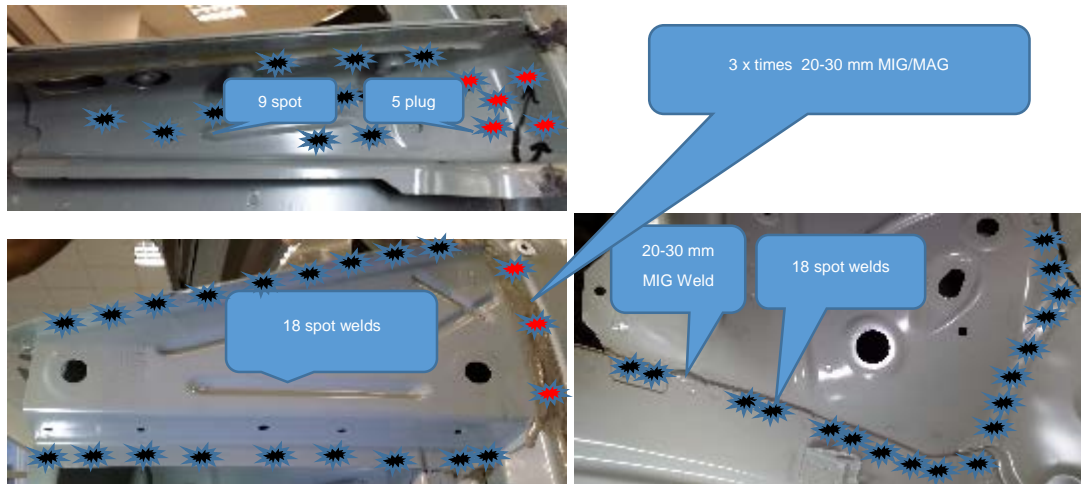
- Safe work practices must always be adhered to and apply to host country's regulations.
- Fit and weld all parts. The lower rail seam-welds must be a continuous weld or a series of continuous welds, longer than 10mm, and all welds must have full penetration.
- The seam-welding can be done with any technique.

Right hand side welding instruction.



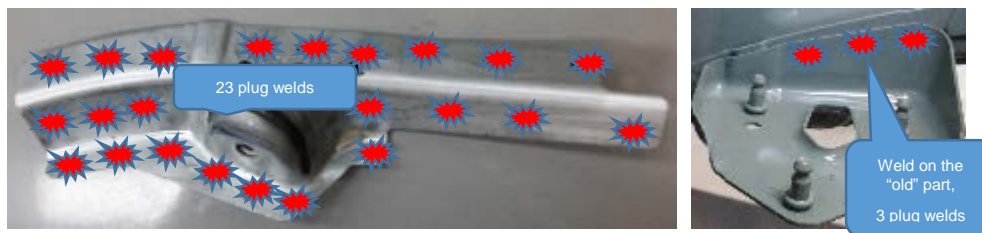
Left hand side welding instruction.





- Do the seam welding on the chassis leg, inside and outside.
- Grind the seam weld where necessary to weld on the reinforcement.

#### Reinforcement



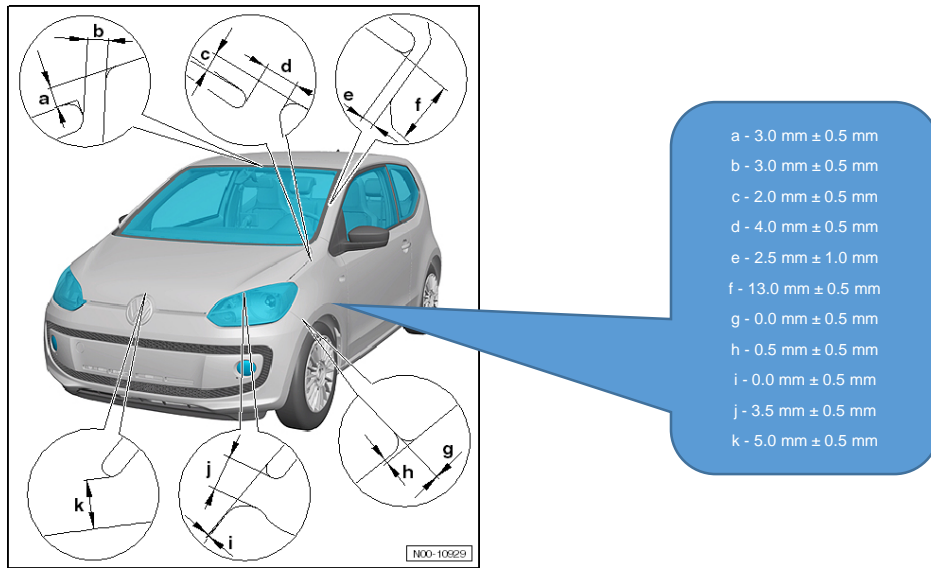
- Completed welds must not be dressed, ground, sanded, or cleaned before marking.
- All welding must be as shown in the pictures above
- Remove all the jigs (EVO parts) to allow alignment measurement.
- Ensure that the measuring bridge and the measuring slide are correctly fitted.

#### **B2 STOP**

Sign in to mark your welding.

### **MODULE B3 GRINDING AND PANEL GAPS**

- Safe work practices must always be adhered to and apply to host country's regulations.
- Grind and sand all plug- and seam - welds. Feather out the paint edges (P120 - P240 grit)
- Fit all front-end bolt-on panels.
- Adjust hood, head lights, fenders and doors to specifications.



### B3 STOP

Sign in TO MARK ALL MOUNTING AND GRINDING AS MENTIONED ABOVE.  
Proceed to any task and complete the task you choose.



## MODULE C1 NON-STRUCTURAL PART(S) REPLACEMENT

### PANEL REMOVAL

- Replacing rear right side panel.
- The following new body parts are required.



Rear side panel:

- Remove left rear door and store in a safe area of your work space.

Following consumables are required:

- Material
  - Quantity
- 1 Adhesive- 2K body adhesive D 180 003 M2



- and welding/zinc primer
- silicon remover LSE 020 100 A3.



Removing side panel:



- Open welded and seam-adhesive bond connections in all areas. Cut outer panel only.

Cut lines:





- Cut outer panel only.
- Detach the side panel.
- Remove all glue and spot-weld remnants.
- Straighten (repair) all deformation.

Note: Any accidental holes or tears to parts not to be replaced must not be welded and repaired.

### Important!

- Do not grind/sand new part in area of bonding surfaces.
- Install side panel (no adhesive). Fit up only. At this point, the door gap and the tailgate gap will not be measured.
- Adjust new part to fit without excessive tension / stress.
- The C pillar upper and lower sill joint gap must be 1mm +/- 1,
- Adjust new part to fit and secure with clamps. (no extra screws)

### Important!

- No adhesive at this point.
- Prepare all equipment and all the items you need to do the actual gluing and welding process.

### C1 STOP

Sign to mark your side panel removal, drilling, cleaning, gaps and preparation of new parts

Proceed to B1

### Important!

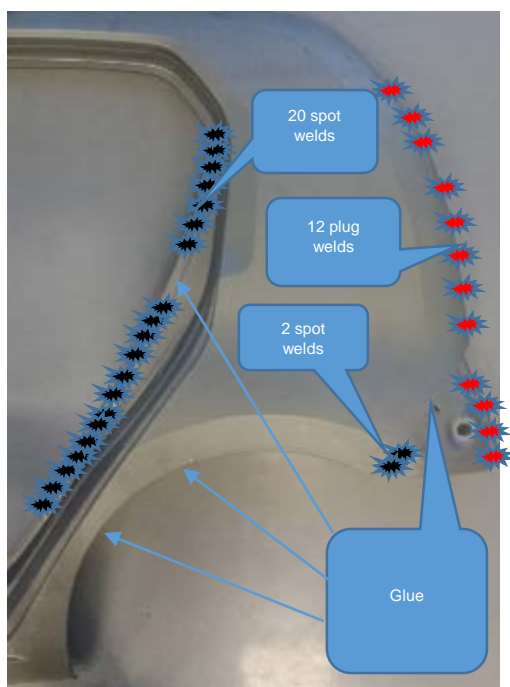
The assessment of C2 will start based on your completion time of C1 logged on the board. This could happen any time while you are busy with project B1 or B2. During the marking process, you will be asked to apply cleaning agent LSE 020 100 A3 to the prepared areas which will receive the glue. Apply the bonding adhesive (glue) and perform the bonding and clamping process. You will also start welding the panel to the vehicle's body whilst being observed. When you have done the first weld, the marking team will leave you again.



## MODULE C2

- Clean the wheel arch bonding surface with silicon remover LSE 020 100 A3.
- Apply adhesive and weld true primer according to VW standard.
- Install side panel without the help of a partner.
- Start the welding process. (the marking team will now leave you)
- Use hammer and dolly to shape the flange of the wheel-arch.
- Dimension (a) = 4,5 mm. +/-1mm

Welding instruction:



### C2 STOP

Sign in to mark your cleaning, bonding, welding of the side panel mounting.  
Proceed back and continue your work on B1 or B2 and continue.





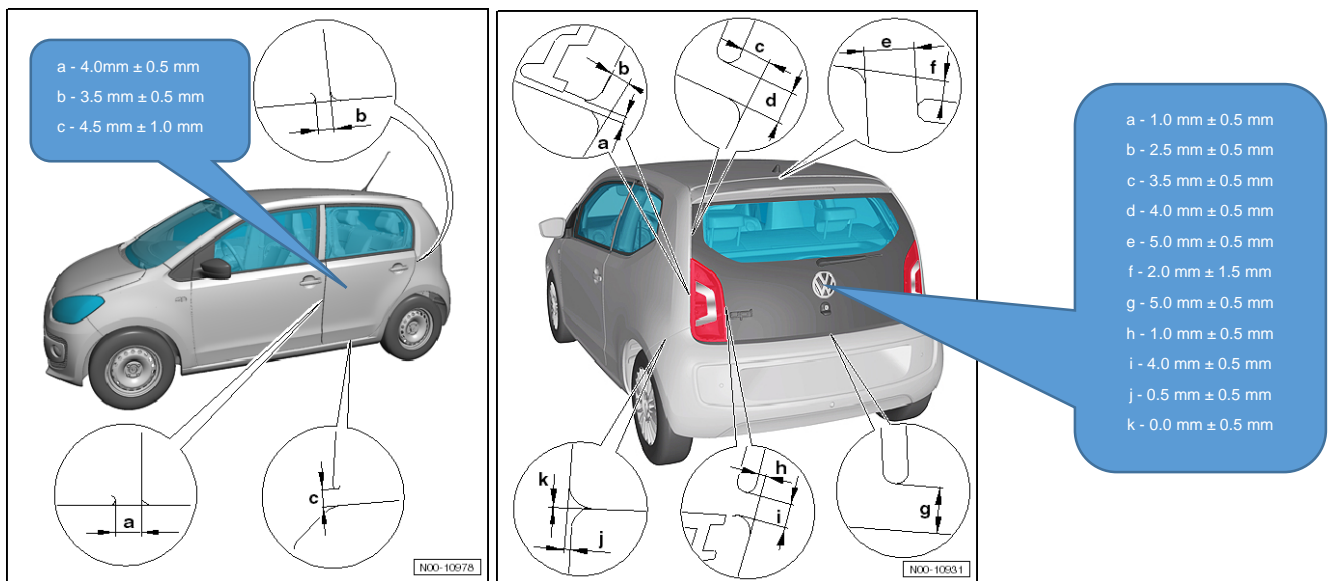
## MODULE C3

### GRINDING

- Grind all your seam- and plug - welds,
- Sand the coat edges.

### PANEL GAPS

- Reinstall all parts removed for repair operations with the specifications pictures below.



### C3 STOP

- Sign in to mark shaping of wheel-arch, grinding and sanding, mounting and panel-gaps.

Proceed to any task and complete the task you choose.





## MODULE D

### Panel Repair 1

- Repair the "big dent" damage to a panel using the metal finishing process
- Safe work practices must always be adhered to and apply to host country's regulations.
- The repair must have the original contour and shape.
- Panel shrinking must be done with electrical equipment or cold shrinking as needed.
- Repair surface defects, sand to P80g or finer, featheredge broken surrounding surfaces to P120g or finer, but not finer than P240g.
- Repair must not have deep file or grinder marks/gouges).
- The panel repair area must not be over thinned due to excessive filing or sanding.

Proceed to any task and complete the task you choose.

Marking of the Panel will be done at the end of the competition

### Panel Repair 2

- Repair several of small dents on a panel by metal finishing.
- Safe work practices must always be adhered to and apply to host country's regulations.
- The repair must have the original contour and shape.
- Panel shrinking must be done with electrical equipment or cold shrinking as needed.
- Repair surface defects, sand to P80g or finer, featheredge broken surrounding surfaces to P120g or finer, but not finer than P240g (Repair must not have deep file or grinder marks/gouges).
- The panel repair area must not be over thinned due to excessive filing or sanding.

Proceed to any task and complete the task you choose.

Marking will be done at the end of the competition.

- At the end of competition, both sides of tail lamp must be on the body.



## **MODULE E AUTOBODY RELATED REPAIRS SUCH AS/BUT NOT LIMITED TO ELECTRICAL DIAGNOSES, PLASTIC REPAIR, AND/OR GLASS REPLACEMENT.**

**Note - Safe work practices must always be adhered to and apply to host country's regulations.**

Procedure:

- Make sure that car is securely parked.
- Apply all car protection covers.
- Switch on ignition
- Connect the VAS 6150 to the vehicle
- Read out the control units and faults
- Identify
- Follow the test plan.
- Change the unit
  
- Delete the fault memory
- Finish the test plan
- Disconnect the VAS
- Remove all car protection covers.

## **EQUIPMENT, MACHINERY, INSTALLATIONS AND MATERIALS REQUIRED**

ITEM	QUANTITY	MATERIAL	DESCRIPTION	NOTES
None				





B3	Wheelhouse grinding and sanding	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
B4	Fender and bonnet assembly	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Sub Criteria ID	Sub - Criteria Name or Description	Aspect Type O = Obj S = Sub
C1	PANEL REMOVAL AND FIT INSTALLED REPL	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
C2	REPLACE PANEL/PART(S) BY glueing and wel	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
B2	Welding	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
C3	DRESS/GRIND/SAND/GAPS	<input type="radio"/> <input type="radio"/>



O

Sub Criteria ID	Sub - Criteria Name or Description	Aspect Type O = Obj S = Sub
Sub Criteria ID	Sub - Criteria Name or Description	Aspect Type O = Obj S = Sub
Sub Criteria ID	Sub - Criteria Name or Description	Aspect Type O = Obj S = Sub

**Skill name**

Autobody Repair

<b>Criteria</b>	<b>Mark</b>
Diagnosis and Correction	20,00
Structural Part(s) Replacement	35,00
Non-Structural Part(s) Replacement	25,00
Panel Repair	15,00
Autobody Related Repairs (Electrical, Plastic, Glass, etc.)	5,00

Aspect - Description	Requirement or Nominal Size
	Clamps and bench mounting bolts are at correct torque
Measuring bridge/ladder is correctly fitted	Yes/No
Measuring bridge/ladder is correctly locked / torqued	Min 10 Nm
Left side measuring point 10 correctly reported	tolerance:±3mm
Right side measuring point 10 correctly reported	tolerance:±3mm
Left side measuring point 14 correctly reported	tolerance:±3mm
Right side measuring point 14 correctly reported + point L11	tolerance:±3mm
Left side measuring point 1 correctly reported	tolerance:±3mm
Right side measuring point 1 correctly reported	tolerance:±3mm
Left side measuring point 2 correctly reported	tolerance:±3mm
Right side measuring point 2 correctly reported	tolerance:±3mm
Left side measuring point 3 correctly reported	tolerance:±3mm
Right side measuring point 3 correctly reported	tolerance:±3mm
Left side measuring point 4 correctly reported	tolerance:±3mm
Right side measuring point 4 correctly reported	tolerance:±3mm
Left side measuring point 6 correctly reported	tolerance:±3mm
Right side measuring point 6 correctly reported	tolerance:±3mm
Left side measuring point 7 correctly reported	tolerance:±3mm
Right side measuring point 7 correctly reported	tolerance:±3mm
Left side measuring point 8 correctly reported	tolerance:±3mm
Right side measuring point 8 correctly reported	tolerance:±3mm
Left side measuring point 9 correctly reported	tolerance:±3mm
Right side measuring point 9 correctly reported	tolerance:±3mm
Left side overhead measuring point H 1, 2 and 3 correctly reported	tolerance:±3mm
Right side overhead measuring point H 1 and 3 correctly reported	tolerance:±3mm
Left side overhead measuring point H 7, 8, 9 and 10 correctly reported	tolerance:±3mm
Right side overhead measuring point H 4 and 8 correctly reported	tolerance:±3mm
Left side measuring point 10 correctly reported	tolerance:±2mm
Right side measuring point 10 correctly reported	tolerance:±2mm



Left side measuring point 14 correctly reported	tolerance:±2mm
Right side measuring point 14 correctly reported + point L11	tolerance:±2mm
Left side measuring point 1 correctly reported	tolerance:±2mm
Right side measuring point 1 correctly reported	tolerance:±2mm
Left side measuring point 2 correctly reported	tolerance:±2mm
Right side measuring point 2 correctly reported	tolerance:±2mm
Left side measuring point 3 correctly reported	tolerance:±2mm
Right side measuring point 3 correctly reported	tolerance:±2mm
Left side measuring point 4 correctly reported	tolerance:±2mm
Right side measuring point 4 correctly reported	tolerance:±2mm
Left side measuring point 6 correctly reported	tolerance:±2mm
Right side measuring point 6 correctly reported	tolerance:±2mm
Left side measuring point 8 correctly reported	tolerance:±2mm
Right side measuring point 8 correctly reported	tolerance:±2mm
Left side overhead measuring point 1 correctly reported	tolerance:±2mm
Right side overhead measuring point 1 correctly reported	tolerance:±2mm
Left side overhead measuring point 3 correctly reported	tolerance:±2mm
Right side overhead measuring point 3 correctly reported	tolerance:±2mm
No damage or distortion to parts not being replaced	Yes/No
No spark or other damage to measuring bridge or slide	Yes/No
Correct use of X3 and EVO system	Yes/No

Aspect - Description	Requirement or Nominal Size
	Make sure the L1 is in right position, X3
Make sure the L3 is in right position, X3 EVO3	±1mm
Make sure the L9 is in right position, X3	±1mm
Correct use of EVO3 system L3	Yes/No
Front Side Frame LH joint gap is within tolerance outside	1.5mm-2,5mm
Front Side Frame LH joint gap is within tolerance inside	1.5mm-2,5mm
Holes made to the correct diameter 8 + 6 + 7 + 5 + 23 + 3	8mm +/- 0.5mm
Holes drilled to the correct depth, no hole and not deeper than ha	Yes/No
Parts removed without holes to remaining or existing flange.	Yes/No
Body flanges, adjacent panels and reinforcements are good.	Yes/No
No distortion and weld remnants in spot weld areas and flanges	±1mm
No distortion and weld remnants in spot weld areas and flanges	Yes/No
No distortion and weld remnants in spot weld areas and flanges	Yes/No
All paint on the original body flanges are removed in preparation	Yes/No
All paint on replacement parts flanges are removed in preparation	Yes/No
Front Side Frame LH being cut as per instruction (inside)	100 and 210mm±2
Front Side Frame LH being cut as per instruction (outside)	110 and 110mm±2
Upper member left side being cut as per instruction	210 and 250mm±2
Welding primer applied to body for welding	Yes/No
Welding primer applied to replacement parts for welding. Welding	Yes/No
Plug weld (8 + 6 + MIG + 7 + 5 + 3xMIG + 23 + 3 welds)	Placement/Numbe
Plug weld (8 + 6 + MIG + 7 + 5 + 3xMIG + 23 + 3 welds)	Max 2mm High
Plug weld (8 + 6 + MIG + 7 + 5 + 3xMIG + 23 + 3 welds)	Fully Welded
Plug weld (8 + 6 + MIG + 7 + 5 + 3xMIG + 23 + 3 welds)	Max 12mm
Plug and spot weld - exopt inside	Panel Gap
Spot weld (9 + 2 + 17 + 14 + 9 + 18 + 18 + welds)	Placement/Numbe
Spot weld (9 + 2 + 17 + 14 + 9 + 18 + 18 + welds)	Burn through or me
Continues weld left on rail in and out	Fully Welded

Continues weld left on rail in and out Continues weld left on rail in and out Continues weld left on rail in and out	Max 2mm High Proper Penetration Length
Dress/Grind/Sand all plug and seam welds Dress/Grind/Sand Dress/Grind/Sand Grind continues weld Continues weld	Proper Sanded Proper Grounded Weld Defect Proper Grounded Proper Penetration
Front Fender bolts are fully fitted Bonnet/hood bolts are fully fitted Gaps between hood and fender RH Gaps between hood and fender LH Gaps between front door RH and fender RH Gaps between front door LH and fender LH No extra damage to body. Dents and scratches	min7.8N*m min18N*m 4.0mm +/-0,8 4.0mm +/-0,8 4.0mm +/-0,8 4.0mm +/-0,8 Panel Damage

Aspect - Description	
	Requirement or Nominal Size

C pillar (upper butt joint) is cut as per instructions C pillar upper joint gap is within tolerance C pillar (lower butt joint) is cut as per instructions C pillar (lower butt joint) is within tolerance No damage or distortion to parts not being replaced No damage to flanges/reinforcements by cutting or drilling No weld remnants remain in spot weld areas and flanges No weld remnants remain in spot weld areas and flanges No weld remnants remain in spot weld areas and flanges Coatings on original body removed in areas to be glued Coatings on replacement parts removed in areas to be glued	tolerance: ±3mm 1mm +/- 1mm tolerance: ±3mm 1mm +/-1mm Yes/No Panel Damage Yes/No Yes/No Prover Grounded Yes/No Yes/No
Cleaning with silicon remover on all zones correctly Cleaning with silicon remover on replacement parts cleaned in a Apply weld true primer Applied the minimum amount of glue in right position on the panel Applied the minimum amount of glue in right position on the original	Yes/No Yes/No min 5mm min 5mm
Plug weld (12 welds) Plug weld (12welds) Plug weld (12 welds) Plug weld (12welds) Plug and spot weld - exept inside Spot weld (7 + 13 + 2 welds) Spot weld (7 + 13 + 2 welds) Spot weld (7 + 13 + 2 welds) Continues weld upper and lower aerea Continues weld upper and lower aerea Continues weld upper and lower aerea, open after competition	Placement/Numbe Max 2mm High Fully Welded Max 12mm Panel Gap Placement/Numbe Burn Through Metal missing Fully Welded Max 2mm High Proper Penetration
Forming the wheel arch, Glue, gap and dimention/form Dress/Grind/Sand joints and surrounding area on upper joint	4.5mm +/- 1mm No glue in joint are

Dress/Grind/Sand joint and surrounding area on lower joint (sill) Paint edges feathered, sanded with P 120 or finer	No glue in joint area Yes / No
Left side door and quarter panel gap as per specifications Side panel, dorrs and boot lid has no additional damage Wheel arch flanges inner gap	tolerance:±0.8mm yes/no max 0,5

Aspect - Description	
	Requirement or Nominal Size

Panel has the original contour and shape. No. 1 Template Panel has the original contour and shape. No. 2 Panel has the original contour and shape. No. 3 Panel has the original contour and shape. No. 4 Panel has the original contour and shape. No. 5 Panel has the original contour and shape. No. 6 Panel has the original contour and shape. No. 7 Metal finish is good Paint edge feather is good Panel is smooth - no evident high or evident low areas	tolerance: ±1mm tolerance: ±1mm tolerance: ±1mm tolerance: ±1mm tolerance: ±1mm tolerance: ±1mm tolerance: ±1mm P80 to P120 P120 or finer
Panel has the original contour and shape. No. 1 Panel has the original contour and shape. No. 2 Panel has the original contour and shape. No. 3 Panel has the original contour and shape. No. 4 Panel has the original contour and shape. No. 5 Panel has the original conture and shape. No. 6 No damage due to electrical shrinking Metal finish is good Paint edge feather is good Panel is smooth - no evident high or evident low areas	tolerance: ±1mm tolerance: ±1mm tolerance: ±1mm tolerance: ±1mm tolerance: ±1mm tolerance: ±1mm Nes/No P80 to P120 P120 or finer

Aspect - Description	
	Requirement or Nominal Size

The car protection kit has been used.	yes/no
Car parked securely (handbrake, trans. In P)	yes/no
Confirm Fault excists and illuminated malfunction lamp checked.	yes/no
Correctly connecting VAS interface and communicate with the ve	yes/no
Identify the unit	yes/no
Correctly Choose the needed test plan	yes/no
Inspection	yes/no
Replace the unit with a new one	yes/no
Delete the fault memory	yes/no
Switch off the ignition for ?? seconds and then switch on ignition	yes/no
Check no items /person in the car	yes/no
Check that everything is working correctly	yes/no
Disconnect the VAS Interface and turn off ignition	yes/no

Return any tools /equipment/covers used to table.

yes/no

Aspect - Description		Requirement or Nominal Size
Aspect - Description		Requirement or Nominal Size
Aspect - Description		Requirement or Nominal Size

For Objective Assessment Only	Max Mark
Add - (Extra Aspect Information)	
Deduct 0.25 for each bolt without correct torque or missing	0,50
Deduct 0.25 if measuring bridge is incorrectly fitted	0,50
Deduct 0.25 if measuring bridge lock is incorrectly torqued	0,50
Deduct 0.15 for each incorrect length, width or height, rep	0,30
Deduct 0.15 for each incorrect length, width or height, rep	0,30
Deduct 0.15 for each incorrect length, width or height, rep	0,30
Deduct 0.15 for each incorrect length, width or height, rep	0,60
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.05 for each incorrect length, width or height, rep	0,15
Deduct 0.10 for each incorrect length, width or height, rep	0,30
Deduct 0.10 for each incorrect length, width or height, rep	0,30

Criterion  
A

Total  
Mark

Deduct 0.10 for each incorrect length, width or height, reported	0,30
Deduct 0.10 for each incorrect length, width or height, reported	0,50
Deduct 0.20 for each incorrect length, width or height, reported	0,60
Deduct 0.20 for each incorrect length, width or height, reported	0,60
Deduct 0.20 for each incorrect length, width or height, reported	0,60
Deduct 0.20 for each incorrect length, width or height, reported	0,60
Deduct 0.20 for each incorrect length, width or height, reported	0,60
Deduct 0.20 for each incorrect length, width or height, reported	0,60
Deduct 0.20 for each incorrect length, width or height, reported	0,60
Deduct 0.20 for each incorrect length, width or height, reported	0,60
Deduct 0.20 for each incorrect length, width or height, reported	0,60
Deduct 0.20 for each incorrect length, width or height, reported	0,60
Deduct 0.20 for each incorrect length, width or height, reported	0,60
Deduct 0.20 for each incorrect length, width or height, reported	0,60
Deduct 0.20 for each incorrect length, width or height, reported	0,60
Deduct 0.20 for each incorrect length, width or height, reported	0,60
Deduct 0.20 for each incorrect length, width or height, reported	0,60
Deduct 0.20 for each incorrect length, width or height, reported	0,60
Deduct 0.20 for each incorrect length, width or height, reported	0,60
Deduct 0.20 for each incorrect length, width or height, reported	0,60
Deduct 0.50 for each damage	0,50
Deduct 0.50 for each damage	0,50
Deduct 1.0 for each ask , mistake, and set up.	2,00

For Objective Assessment Only	Max Mark
Add - (Extra Aspect Information)	

Criterion B      Total Mark

Tolerance +/- 1mm difference between the measuring points	0,60
Tolerance +/- 1mm difference between the measuring points	0,60
Tolerance +/- 1mm difference between the measuring points	0,60
As in the picture in the project	1,00
Deduct 0.25 for each starting 5mm exceeding the tolerance	1,00
Deduct 0.25 for each starting 5mm exceeding the tolerance	0,60
Deduct 0.2 for each hole with incorrect diameter or number	1,50
Deduct 0.1 for each hole with incorrect depth	1,50
Deduct 0.2 for each hole not required for plug welding	1,00
Deduct 0.2 for each damage + 0,2 for each 5mm damage	0,50
Deduct 0.1 for each 25mm not straightened	0,50
Deduct 0.1 for each spot weld not ground level	0,50
Deduct 0.1 for each spot being ground too deep	1,00
Deduct 0.1 for each 50mm paint not removed. Sumerized.	1,00
Deduct 0.1 for each 50mm paint not removed. Sumerized.	1,00
Measurement from the edge of the reference	0,50
Measurement from the edge of the reference	0,50
Measurement from the edge of the reference	0,50
Deduct 0.1 for each part without primer application	0,50
Deduct 0.1 for each part without primer application. If weld	0,80
Deduct 0.1 for each incorrectly placed or incorrect number	2,00
Deduct 0.1 for each weld exceeding 2mm high	2,00
Deduct 0.1 for each weld not fully welded	2,00
Deduct 0.1 for diameter larger than 1 1/2 times hole size	2,00
Deduct 0.1 where panel gap is greater than 0.5mm	2,00
Deduct 0.1 for each weld incorrectly placed or number.	1,50
Deduct 0.1 for each spot weld burn through or metal is mis	0,50
Deduct 0.1 for each 2mm of missing weld or not fully weld	0,50

Deduct 0.1 for each weld exceeding 2mm high, and 0,1 ex	0,50
Deduct 0.1 for each 5mm weld not fully penetrated	0,50
Deduct 0.1 for each seam-welds their length is shoter than	0,50
Deduct 0.1 for each 50mm not sanded and out feadered.	0,50
Deduct 0.2 for each 5mm ground too deep or not enough.	0,50
Deduct 0.2 for each defect weld, such as pinhole, undercu	0,50
Deduct 0.2 for each 5mm ground too deep or not enough	0,50
Deduct 0.1 for each 5mm weld not fully penetrated	0,50
Deduct 0.1 for each missing or loose bolt, clip or pin	0,40
Deduct 0.1 for each missing or loose bolt, clip or pin	0,40
deduct 0.2 for each point out of tolerance	0,40
deduct 0.2 for each point out of tolerance	0,40
deduct 0.2 for each point out of tolerance	0,40
deduct 0.2 for each point out of tolerance	0,40
Deduct 0.1 for each 10mm damage to panel	0,40

For Objective Assessment Only	Max Mark
Add - (Extra Aspect Information)	

Criterion C Total Mark

Deduct 0.5 for outside of tolerance	0,50
Deduct 0.1 for each 5mm of joint outside of tolerance	1,00
Deduct 0.5 for outside of tolerance	0,50
Deduct 0.1 for each 5mm of joint outside of tolerance	1,00
Deduct 0.2 for each hole not required for plug welding	1,00
Deduct 0.2 for each starting 5mm damage to panel	2,00
Deduct 0.2 for each starting 25mm not straightened	1,00
Deduct 0.2 for each spot weld remnant not ground level	0,50
Deduct 0.2 for each starting 5mm area being ground too d	0,50
Deduct 0.1 for each starting 50mm area not needed coating	0,50
Deduct 0.1 for each starting 50mm area where coating are	0,50
Deduct 0.10 for each zone not cleaned	0,20
Deduct 0.10 for each zone not cleaned	0,20
Deduct 0,2	0,40
Deduct all marks if any mistake	0,30
Deduct all marks if any mistake	0,30
Deduct 0.5 for each incorrectly placed or incorrect number	1,00
Deduct 0.5 for each weld exceeding 2mm high	1,00
Deduct 0.5 for each weld not fully welded	1,00
Deduct 0.5 for diameter larger than 1 1/2 times hole size	1,00
Deduct 0.5 where panel gap is greater than 0.5mm	1,00
Deduct 0.1 for each weld incorrectly placed or number.	1,00
Deduct 0.1 for each spot weld burn through	0,50
Deduct 0.1 for each spot weld where metal is missing	0,50
Deduct 0.1 for each 2mm of missing weld or not fully weld	0,50
Deduct 0.1 for each weld exceeding 2mm high, and 0,1 ex	0,50
Deduct 0.1 for each 5mm weld not fully penetrated	2,00
Deduct 0,2 for each starting 50mm of mistake	1,00
Deduct 0.1 for each 5mm not enough glue removed	1,00

Deduct 0.1 for each 5mm not enough glue removed	1,00
Deduct 0.1 for each 25mm line not sanded	0,50
Deduct 0.1 for each incorrect Gap	0,20
Deduct 0.10 for each damage	0,30
Deduct 0.1 for every 50mm out of tolerance	0,60

For Objective Assessment Only	Max Mark
Add - (Extra Aspect Information)	

Criterion D Total Mark

Deduct 0.1 for every 1 mm exceeding tolerance, damage	0,50
Deduct 0.1 for every 1 mm exceeding tolerance, damage	0,50
Deduct 0.1 for every 1 mm exceeding tolerance, damage	0,50
Deduct 0.1 for every 1 mm exceeding tolerance, damage	0,50
Deduct 0.1 for every 1 mm exceeding tolerance, damage	0,50
Deduct 0.1 for every 1 mm exceeding tolerance, damage	0,50
Deduct 0.1 for every 1 mm exceeding tolerance, damage	0,50
Deduct 0.1 for each 50 mm square not sanded	0,40
Deduct 0.1 for each 50 mm in length not sanded	0,20
Score will be measured on scale of 10	4,50

Deduct 0.1 for every 1 mm exceeding tolerance	0,40
Deduct 0.1 for every 1 mm exceeding tolerance	0,40
Deduct 0.1 for every 1 mm exceeding tolerance	0,40
Deduct 0.1 for every 1 mm exceeding tolerance	0,40
Deduct 0.1 for every 1 mm exceeding tolerance	0,40
Deduct 0.1 for every 1 mm exceeding tolerance	0,40
Deduct 0.1 for every 1 mm exceeding tolerance	0,40
Deduct 0.1 for each dent or hole	0,40
Deduct 0.1 for each 50 mm square not sanded	0,40
Deduct 0.1 for each 50 mm in length not sanded	0,20
Score will be measured on scale of 10	3,00

For Objective Assessment Only	Max Mark
Add - (Extra Aspect Information)	

Criterion E Total Mark

Deduct 0.1 for not using each cover	0,40
Deduct 0.2 if not performed	0,20
Deduct 0.2 if not performed	0,20
Deduct 0.25 if not performed	0,25
Deduct 0.4 if not performed	0,40
Deduct 0.5 if not performed	0,50
Deduct 0.1 for each check not performed	0,20
Deduct 1 if not performed	1,00
Deduct 0.15 if not performed	0,50
Deduct 0.5 if not performed	0,50
Deduct 0.1 for each check not performed	0,20
Deduct 0.25 if not performed	0,25
Deduct 0.15 if not performed	0,15



Deduct 0.25 if not performed

0,25

For Objective Assessment Only	Max Mark
Add - (Extra Aspect Information)	

Criterion F

Total  
Mark

For Objective Assessment Only	Max Mark
Add - (Extra Aspect Information)	

Criterion G

Total  
Mark

For Objective Assessment Only	Max Mark
Add - (Extra Aspect Information)	

Criterion H

Total  
Mark

Competition

Total  
Mark

20,00

35,00

25,00

15,00

5,00

0,00

0,00

0,00

100,00