

# Comparison of DA62 (SDK), which works, and my project (Hunter), which doesn't.

With the exception of the WiperLine, which I don't use in my project, I've tried to reproduce the DA62 parameters exactly. I note the following points:

- The “rainDropSide” parameter must be a Boolean value. As the exporter treats it as a numeric value, it doesn't work.
- I can't understand why the two parameters “microScratchesStrength” and “microScratchesTiling” aren't copied in the project package construction. But these two values in the source gltf are not those set in Blender:
  - the value of “microScratchesTiling” should be 1.1, but in Blender, I can't enter a value greater than 1...
  - the value of “microScratchesStrength” in Blender is 0.5, and the source gltf contains 1...
- the “windshieldDetailNormalTexture” scale does not appear in the source gltf (coming from the Detail Normal Scale parameter in Blender)
- My knowledge is very limited, because I can't modify, I think..., a gltf file without also modifying the bin...! In any case, my attempts to modify gltf didn't work. And I don't think I can modify a bin file...!?

# DA62

Gltf source

```

}, {
  "pbrMetallicRoughness": {
    "baseColorFactor": [0.385, 0.385, 0.385, 0.01],
    "metallicFactor": 0.0,
    "roughnessFactor": 0.02,
    "metallicRoughnessTexture": {
      "index": 31
    }
  },
  "occlusionTexture": {
    "index": 31
  },
  "alphaMode": "BLEND",
  "name": "Windshield",
  "extensions": {
    "ASOBO_material_draw_order": {
      "drawOrderOffset": 1
    },
    "ASOBO_material_rain_options": {
      "rainDropScale": 0.4,
      "rainDropSide": true
    },
    "ASOBO_material_detail_map": {
      "UVScale": 7.0,
      "blendThreshold": 0.1,
      "detailColorTexture": {
        "index": 36
      },
      "detailNormalTexture": {
        "scale": 0.02,
        "index": 37
      }
    },
    "ASOBO_material_windshield_v3": {
      "windshieldDetailNormalTexture": {
        "scale": 0.02,
        "index": 32
      },
      "scratchesNormalTexture": {
        "index": 33
      },
      "windshieldInsectsTexture": {
        "index": 34
      },
      "windshieldInsectsMaskTexture": {
        "index": 35
      },
      "detail1Rough": 0.05,
      "detail2Rough": 0.05,
      "detail1Opacity": 0.5,
      "detail2Opacity": 0.5,
      "microScratchesTiling": 1.1,
      "microScratchesStrength": 0.05,
      "detailNormalRefractScale": 0.05,
      "wiperLines": true,
      "rainDropScale": 0.4,
      "wiper1State": 0.0
    }
  }
}, {
  "pbrMetallicRoughness": {

```

# Hunter

Gltf source

```

{
  "alphaMode": "BLEND",
  "emissiveFactor": [
    0,
    0,
    0
  ],
  "extensions": {
    "ASOBO_material_draw_order": {
      "drawOrderOffset": 5
    },
    "ASOBO_material_detail_map": {
      "detailColorTexture": {
        "index": 103
      },
      "detailNormalTexture": {
        "index": 104,
        "scale": 0.019999999552965164
      },
      "UVScale": 7,
      "blendThreshold": 0.1000000149011612
    },
    "ASOBO_material_windshield_v3": {
      "detail1Rough": 0.05000000074505806,
      "detail2Rough": 0.05000000074505806,
      "detail1Opacity": 0.5,
      "detail2Opacity": 0.5,
      "microScratchesTiling": 1,
      "microScratchesStrength": 1,
      "detailNormalRefractScale": 0.05000000074505806,
      "wiperLines": false,
      "wiperLinesTiling": 1,
      "wiper1State": 0,
      "windshieldDetailNormalTexture": {
        "index": 105
      },
      "scratchesNormalTexture": {
        "index": 106
      },
      "windshieldInsectsTexture": {
        "index": 107
      },
      "windshieldInsectsMaskTexture": {
        "index": 108
      }
    },
    "ASOBO_material_rain_options": {
      "rainDropScale": 0.4000000059604645,
      "rainDropSide": 1
    }
  },
  "extras": {},
  "name": "HunterWindshieldInterior",
  "occlusionTexture": {
    "index": 109
  },
  "pbrMetallicRoughness": {
    "baseColorFactor": [
      1,
      1,
      1,
      0.009999999776482582
    ],
    "baseColorTexture": {
      "index": 110
    },
    "metallicFactor": 0,
    "metallicRoughnessTexture": {
      "index": 109
    },
    "roughnessFactor": 0.019999999552965164
  }
},

```

# DA62

Gltf package

```
}, {
  "name": "Windshield",
  "alphaMode": "BLEND",
  "pbrMetallicRoughness": {
    "baseColorFactor": [0.385, 0.385, 0.385, 0.01],
    "metallicFactor": 0.0,
    "roughnessFactor": 0.02,
    "metallicRoughnessTexture": {
      "index": 31
    }
  },
  "extensions": {
    "ASOBO_material_detail_map": {
      "UVScale": 7.0,
      "blendThreshold": 0.1,
      "detailColorTexture": {
        "index": 36
      },
      "detailNormalTexture": {
        "index": 37,
        "scale": 0.02
      }
    },
    "ASOBO_material_draw_order": {
      "drawOrderOffset": 1
    },
    "ASOBO_material_rain_options": {
      "rainDropScale": 0.4,
      "rainDropSide": true
    },
    "ASOBO_material_windshield_v3": {
      "detail1Opacity": 0.5,
      "detail1Rough": 0.05,
      "detail2Opacity": 0.5,
      "detail2Rough": 0.05,
      "detailNormalRefractScale": 0.05,
      "microScratchesStrength": 0.05,
      "microScratchesTiling": 1.1,
      "rainDropScale": 0.4,
      "scratchesNormalTexture": {
        "index": 33
      },
      "windshieldDetailNormalTexture": {
        "index": 32,
        "scale": 0.02
      },
      "windshieldInsectsMaskTexture": {
        "index": 35
      },
      "windshieldInsectsTexture": {
        "index": 34
      },
      "wiperLines": true
    }
  }
}, {
```

# Hunter

Gltf package

```
}, {
  "name": "HunterWindshieldInterior",
  "alphaMode": "BLEND",
  "pbrMetallicRoughness": {
    "baseColorFactor": [1.0, 1.0, 1.0, 0.009999999776482582],
    "metallicFactor": 0.0,
    "roughnessFactor": 0.019999999552965165,
    "baseColorTexture": {
      "index": 110
    }
  },
  "metallicRoughnessTexture": {
    "index": 109
  }
},
"extensions": {
  "ASOBO_material_detail_map": {
    "UVScale": 7.0,
    "blendThreshold": 0.10000000149011612,
    "detailColorTexture": {
      "index": 103
    },
    "detailNormalTexture": {
      "index": 104,
      "scale": 0.019999999552965165
    }
  },
  "ASOBO_material_draw_order": {
    "drawOrderOffset": 5
  },
  "ASOBO_material_rain_options": {
    "rainDropScale": 0.4000000059604645
  },
  "ASOBO_material_windshield_v3": {
    "detail1Opacity": 0.5,
    "detail1Rough": 0.05000000074505806,
    "detail2Opacity": 0.5,
    "detail2Rough": 0.05000000074505806,
    "detailNormalRefractScale": 0.05000000074505806,
    "scratchesNormalTexture": {
      "index": 106
    },
    "windshieldDetailNormalTexture": {
      "index": 105
    },
    "windshieldInsectsMaskTexture": {
      "index": 108
    },
    "windshieldInsectsTexture": {
      "index": 107
    }
  }
}
}, {
```

## Details of my Windshield texture settings in Blender :

MSFS2024 Material Parameters

Type: Windshield

Base Color:

Emissive Color:

Emissive Scale: 1000.000

Render Parameters

Draw Order Offset: 5

Don't Cast Shadows

Double Sided

Disable Motion Blur

General Parameters

Metallic Factor: 0.000

Roughness Factor: 0.020

Reflection Mask Strength: 1.000

Normal Scale: 1.000

Detail UV Scale: 7.000

Detail Normal Scale: 0.020

Blend Mask Threshold: 0.100

UV Options

UV Offset U: 0.000

UV Offset V: 0.000

UV Tiling U: 1.000

UV Tiling V: 1.000

UV Rotation: 0.000

Clamp UV U

Clamp UV V

Gameplay Parameters

Collision Material

Road Collision Material

Rain Parameters

Receive Rain

Rain Drop Tiling: 0.40

Rain On BackFace: 1.00

Windshield Wipers Parameters

Wiper Lines

Wiper Animation Parameters

Wiper 1 State: 0.00

Windshield Parameters

Detail 1 (R) Roughness: 0.05

Detail 2 (B) Roughness: 0.05

Detail 1 (R) Opacity: 0.50

Detail 2 (B) Opacity: 0.50

Rain Parameters

Receive Rain

Rain Drop Tiling: 0.40

Rain On BackFace: 1.00

Windshield Wipers Parameters

Wiper Lines

Wiper Animation Parameters

Wiper 1 State: 0.00

Windshield Parameters

Detail 1 (R) Roughness: 0.05

Detail 2 (B) Roughness: 0.05

Detail 1 (R) Opacity: 0.50

Detail 2 (B) Opacity: 0.50

Micro-Scratches Tiling: 1.00

Micro-Scratches Strength: 0.05

Detail Normal Refraction Strength: 0.05

Iridescent Parameters

Use Iridescent Parameters

Textures

Base Color Texture (RGBA)

New Open

Reflection (R) Roughness (G) Metallic (B)

Hunter\_glass\_defaultdirt\_comp... 2 Open

Normal Texture (RGB)

New Open

Secondary Details (RGBA)

New Open

Details 1 (R), Icing Mask (G), Details 2 (B)

Hunter\_glass\_detailmap01\_ma... 2 Open

Details Reflection (R) Roughness (G) Metallic (B)

New Open

Icing Normal (use UV Detail Tiling)

Hunter\_frost\_detail\_norm.png 2 Open

Reflection Mask (UV2)

New Open

Wiper Mask (RGBA)

New Open

Detail Normal (use Detail UV Tiling)

New Open

Scratches Normal

Hunter\_microscratches\_norm.png Open

Insects Albedo (RGBA)

Hunter\_insects\_helico\_albd.png Open

Insects Mask (A)

Hunter\_insects\_helico\_mask.png Open