# Process & Test Description

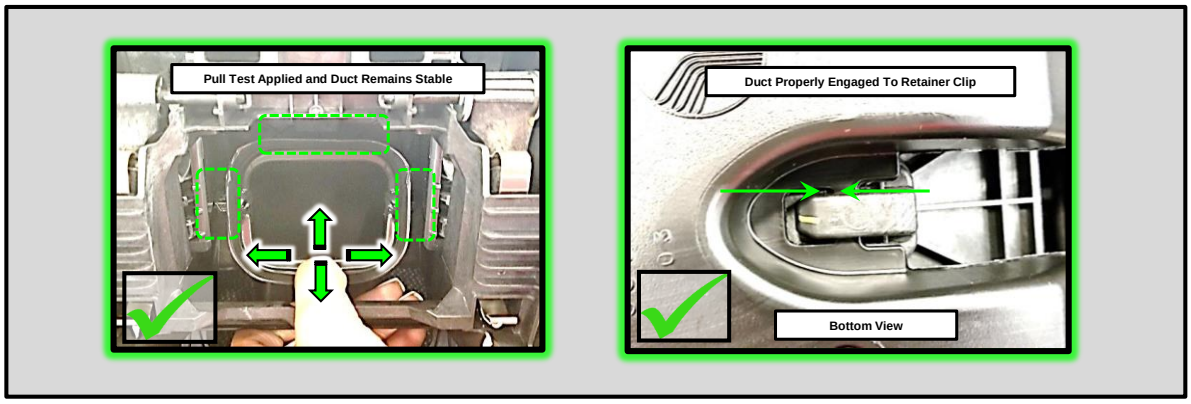
X

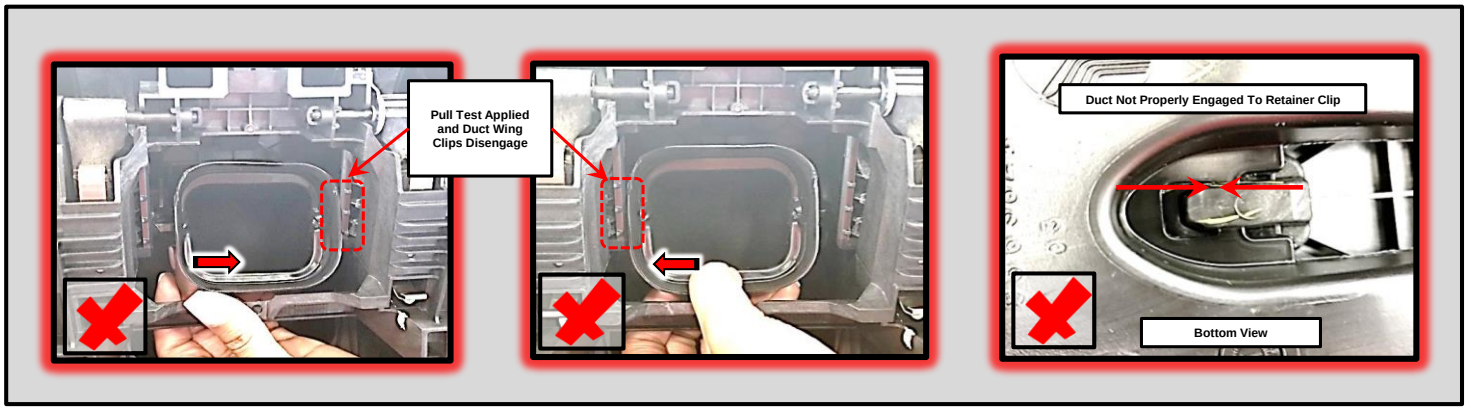
if documentation obligatory (D)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Drawing no: | Prepared by: | PP: | Jerod Williams | Index: | Checked & released by: | PP: | 9/14/2018 Date: | Signature: |
| | | QP: | Roman Sales | | | | | |
| | Description no: | BMW G01 / G02 | | 0 | | QP: | 9/14/2018 Date: | Signature: |
| | First version: | | 9/14/2018 | | | Prod: | 9/14/2018 Date: | Signature: |

| Product: | Sample shop: | | Description of Manufacturing Process: |
|---|---|---|---|
| center console | Pilot: | | Ventilation Duct Testing |
| | Pres-series: | X | |
| | Series: | | |

| No.: | Working description | Machine / device / tools / visualization |
|---|---|---|




**Test description:**

| test point: | Pos. | method: | Frequency: | Test characteristics: | Actions if not ok: rework | Actions if not ok: scrap | testing time sec. |
|---|---|---|---|---|---|---|---|
| Duct Stability | 1 | | 100% | Duct Wing Clips Properly Seated | | x | 3 |
| Duct Position | 2 | | 100% | Left,Right,Top | | x | 4 |
| Bottom Clip Engagement | 3 | | 100% | Carrier Clip/Duct Clip Nest | | x | 5 |

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| Product: | Sample shop: | | Description of Manufacturing Process: |
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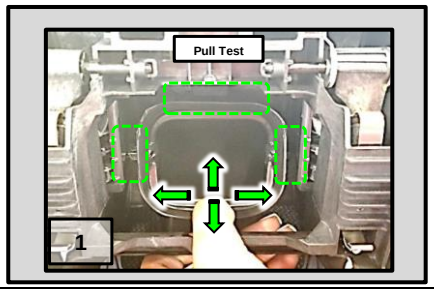
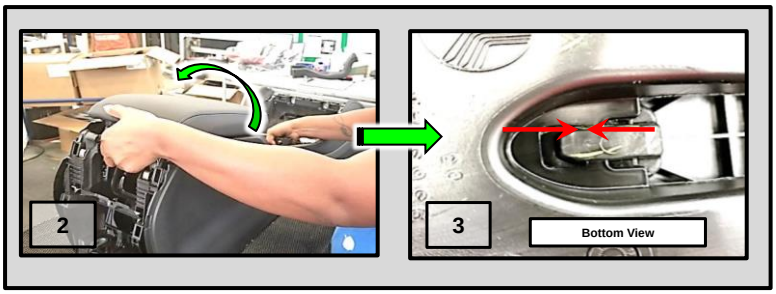
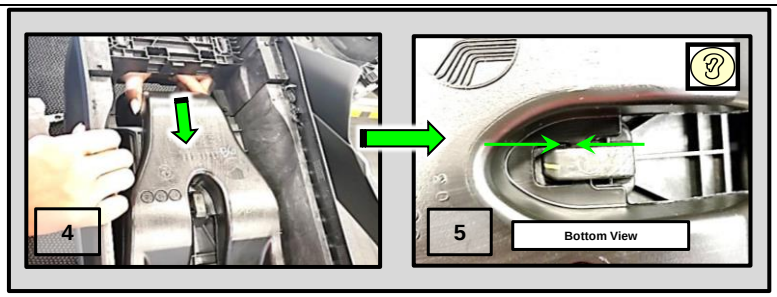
| Center Console | Pilot: | | Ventilation Duct Replacement |
| | Pres-series: | X | |
| | Series: | | |

| No.: | Working description | Machine / device / tools / visualization |
|---|---|---|
| #1 | Use thumb and index finger to perform vertical and horizontal stability pull test to duct to validate properly seated. (See picture 1) |   |
| #2 | If duct is not stable (reference testing protocol for more info) use both hands to flip the assembly over to bottom side and visually inspect retainer clip to validate duct clip nest is properly engaged. (See pictures 2-3) |   |
| #3 | If the duct is not properly engaged to retainer clip, use index finger and thumb to apply pressure to the neck portion of the ventilation duct to re-attempt clip engagement. (See pictures 4-5) |   |

## Test description:

| Test characteristics: | Test devices: | Frequency: | Actions if not ok: |
|---|---|---|---|
| Duct Stability | By Hand | 100% | Re-attempt bottom clip seating position(Maximum 3 attempts) |
| Duct Position | visual | 100% | Re-attempt bottom clip seating position(Maximum 3 attempts) |
| Bottom Clip Engagment | visual | 100% | Re-attempt bottom clip seating position(Maximum 3 attempts) |

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| Product: | Sample shop: | | Description of Manufacturing Process: |
|---|---|---|---|
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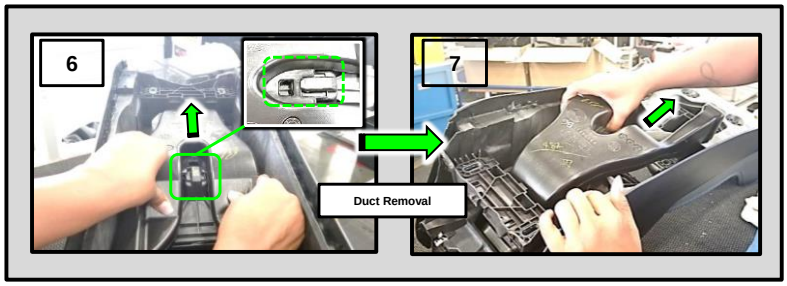
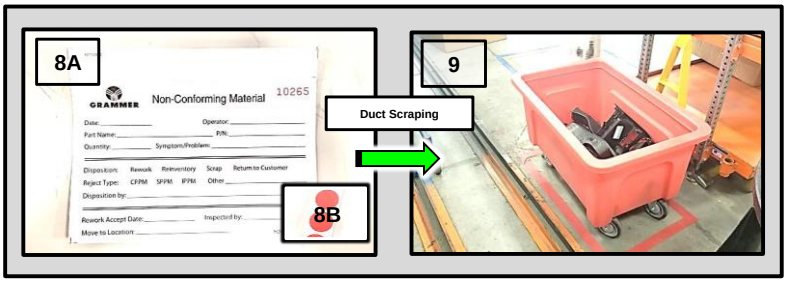
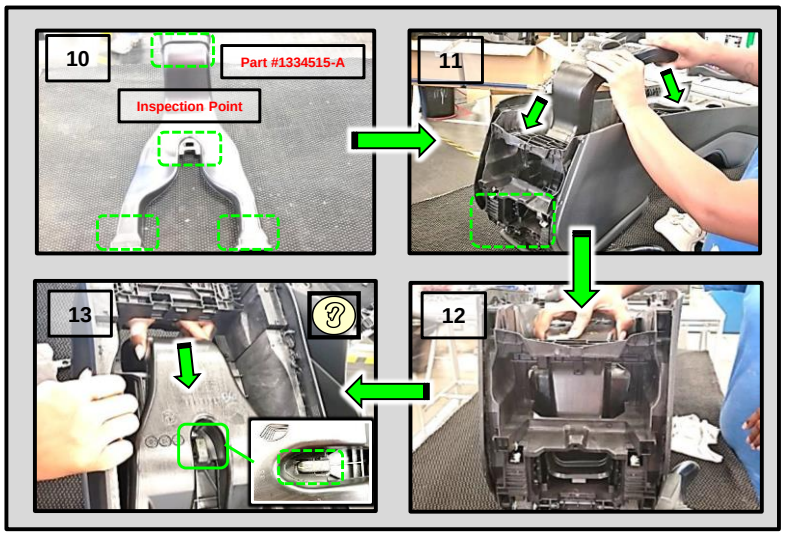
| | Pres-series: | X | |
| | Series: | | |

| No.: | Working description | Machine / device / tools / visualization |
|---|---|---|
| #4 | If duct does not properly seat to retainer clip, use both hands to apply pressure to duct to disengage and remove duct from assembly. (See pictures 6-7) |   |
| #5 | Once part is removed, locate red dot (usually located at rework station) place on bad location on duct and fill out scrap label to signify defect. (See pictures 8A and 8B). Place part inside red bin after proper labeling (See picture 9) |   |
| #6 | Obtain new part from container (1334515-A), visually inspect for any defects (damaged wing clips, duct deterioration, warpages, padding, etc.) and re-do installation to center console assemble. (See pictures 10-13) (Listen for Clip Engagement Sound) |   |

**Test description:**

| Test characteristics: | Test devices: | Frequency: | Actions if not ok: |
|---|---|---|---|
| Bad Ventilation Duct | Visual | 100% | Scrap Part/Notify Team Lead or Shift Lead |

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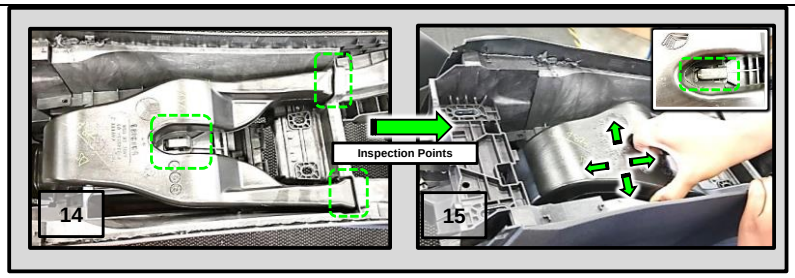
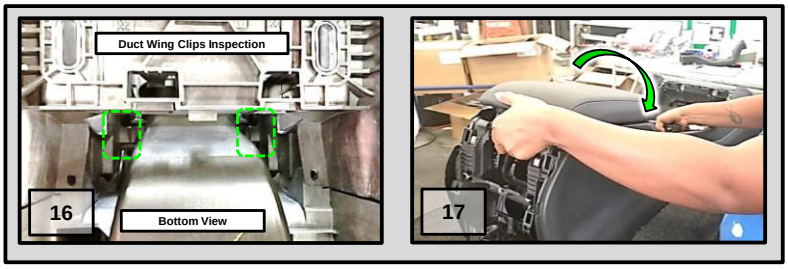
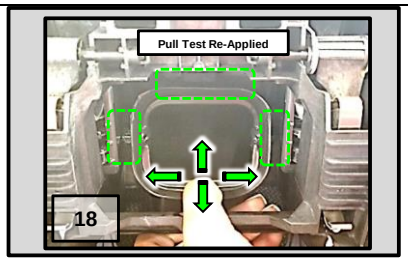
|---|---|---|---|
| #7 | Visually inspect installed part for any process defects (unseated duct openings, insulation damage, deformity, etc.) and use index finger and thumb to apply pull test (vertically/horizontally) to duct to validate properly seated. (See pictures 14-15) |  |   |
| #8 | Visually inspect ventilation duct wing clips to validate properly engaged to carrier and flip center console assembly back over to top surface. (See pictures 16-17) |  |   |
| #9 | Use index finger and thumb to re-apply duct stability test (reference testing procedure for more info) and proceed with final inspection criteria. (See picture 18) |  |   |

**Test description:**

| Test characteristics: | Test devices: | Frequency: | Actions if not ok: |
|---|---|---|---|
| Duct Deterioration | Visual | 100% | Scrap Part/Notify Team Lead or Shift Lead |
| Unseated Duct Wings Clips | Visual | 100% | Re-attempt seating (Maximum 3 attempts)and inspection/scrap part if necessary |
| Duct Stability | Visual and By Hand | 100% | Re-attempt seating (Maximum 3 attempts)and inspection/scrap part if necessary |

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