



INSTRUCCION DE TRABAJO

CLAVE ACI449

REVISION 9

FECHA 21-abr-25

PAGINA 1 / 10

500B BOUNDARY BOOK
500B Libro de Limites

Customer: IGNA
 Location: Springfield KY
 Program: 500B Sienna
 Year Vehicle: 2020

| New Item | New Cross Reference | Description |
|----------|---------------------|--|
| 8750B087 | 366892 | 500B CTR2 HR XSE BLACK |
| 8750B088 | 366821 | 500B FR HR FAB W/O BEZEL LE MEDGRAY |
| 8750B089 | 366822 | 500B FR HR SFT LTH W/O BEZEL FROMAGE/IVORY |
| 8750B090 | 366823 | 500B FR HR SFT LTH W/O BEZEL BLACK/CHOCOLATE BROWN |
| 8750B091 | 366824 | 500B FR HR SFT LTH W/O BEZEL MEDGRAY/GRAY |
| 8750B092 | 366825 | 500B FR HR SFT LTH W BEZEL COOLGRAY/WHITE |
| 8750B093 | 366826 | 500B FR HR SFT LTH W BEZEL MEDGRAY/GRAY |
| 8750B094 | 366827 | 500B FR HR SFT LTH W BEZEL FROMAGE/IVORY |
| 8750B095 | 366828 | 500B FR HR SFT LTH W BEZEL BLACK/RED |
| 8750B096 | 366829 | 500B FR HR SFT LTH W BEZEL BLACK/CARAMEL |
| 8750B097 | 366830 | 500B FR HR SFT LTH W BEZEL BLACK/CHOCOLATE BROWN |
| 8750B098 | 366831 | 500B RR HR FAB W/O BEZEL LE MEDGRAY |
| 8750B099 | 366832 | 500B RR HR SFT LTH W/O BEZEL COOLGRAY/WHITE |
| 8750B100 | 366833 | 500B RR HR SFT LTH W/O BEZEL MEDGRAY/GRAY |
| 8750B101 | 366834 | 500B RR HR SFT LTH W/O BEZEL FROMAGE/IVORY |
| 8750B102 | 366835 | 500B RR HR SFT LTH W/O BEZEL BLACK/RED |
| 8750B103 | 366836 | 500B RR HR SFT LTH W/O BEZEL BLACK/CARAMEL |
| 8750B104 | 366837 | 500B RR HR SFT LTH W/O BEZEL BLACK/CHOCOLATE BROWN |
| 8750B105 | 366838 | 500B RR HR SFT LTH W BEZEL FROMAGE/IVORY |
| 8750B106 | 366839 | 500B RR HR SFT LTH W BEZEL BLACK/RED |
| 8750B107 | 366840 | 500B RR HR SFT LTH W BEZEL BLACK/CHOCOLATE BROWN |
| 8750B108 | 366841 | 500B RR CTR HR FAB W/O BEZEL LE MEDGRAY |
| 8750B109 | 366842 | 500B RR CTR HR SFT LTH W/O BEZEL MEDGRAY |
| 8750B110 | 366843 | 500B RR2 CTR HR FAB W/O BEZEL MEDGRAY |
| 8750B111 | 366893 | 500B RR2 CTR HR SFT LTH W/O BEZEL MEDGRAY |
| 8150B043 | SPI400 | 500B RR AR RH FAB LE MED GRY |
| 8150B044 | SPI402 | 500B RR AR RH SFT LTH MED GRY |
| 8150B005 | SPI265 | 500BRR AR RH SLXSE-LTDBLACK |
| 8150B045 | SPI397 | 500B RR AR LH FAB LE MED GRY |
| 8150B046 | SPI399 | 500B RR AR LH SFT LTH MED GRY |
| 8150B013 | SPI260 | 500BRR AR LH SLXSE -LTDBLACK |
| 8750B046 | SPI364 | 500B OTTMAN LEG SPRT SFT BLK |

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ISR 11
 REV. 1

| Revision | Responsible | Description of Change / Revision | Customer Sign |
|----------|----------------|--|---------------|
| 0 | Alfredo Alfaro | Initial Submission | |
| 1 | David Perez | Open Seam And Deck Aligment Added and to update Part Number. | |
| 2 | David Perez | Added Thread Tension Specification | |
| 3 | Celina Garza | To add criteri to verify Bulges Issue | |
| 4 | David Perez | Update Part number , add "Spec according to EOA" & add Safety Equipment. | |
| 5 | David Perez | To update stitch size in CTR & CTR2 cloth and update part number | |
| 6 | David Perez | To add 8750B061 & 8750B062 part numbers. | |
| 7 | Alfredo Alfaro | Add part numbers for 463D program | |
| 8 | Erick Guichard | Update part number list for trnsfer from KY to BIT | |
| 9 | Erick guichard | To add specs for sliky tape and velcro | |
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| | | | ISR 11 |
| | | | REV. 1 |

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|---|---|--|----------|-----------|
|  | INSTRUCCION DE TRABAJO | | CLAVE | ACI449 |
| | 500B BOUNDARY BOOK 500B Libro de Limites | | REVISION | 9 |
| | | | FECHA | 21-abr-25 |
| | | | PAGINA | 3 / 10 |

1.0 Purpose: This standard details the appearance for Trim Covers and is intended as a supplement to any type or design record.

1.0 Propósito: Esta norma detalla los requisitos de apariencia de Trim Covers y pretende ser un complemento a la parte del dibujo o cualquier tipo de registro de diseño.

2.0 Scope: This standard applies to the all Trim Covers that Inoac Polytec de Mexico is providing to IGNA KY.

2.0 ALCANCE: Esta norma aplica a todos los Trim Covers que Inoac Polytec de Mexico le proporciona a IGNA KY.

2.0 RESPONSABILITY: Quality Engineer in charge is responsible to implement and mantein this instruction (Boundary Book) .



2.0 RESPONSABILIDAD: El Ingeniero de Calidad de Partes encargo del programa es responsable de implementar y mantener esta instrucción (Boundary Book).

3.0 DEFINITIONS:

3.0 DEFINICIONES:

4.0 INSTRUCTIONS: / INSTRUCCIONES:

4.0.1 Equipo de Seguridad / **Safety Equipment.**

Safety Glasses / **Lentes de seguridad**

4.1 In case of conflict between this standard and the drawing specifications, the drawing remains the master and supersedes this standard. In case where the part fuction is affected by non compliance to requirements in this standard, eny deviation to the appearance standard must be approved by Engineering and Quality .

En caso de conflicto entre esta norma y las especificaciones del dibujo , el dibujo sigue mandando y sustituye a esta norma. En caso de que la funcionalidad de la pieza se vea afectada por el incumplimiento de los requisitos de esta norma, cualquier desviación al estandard apariencia deben ser aprobados por el área de Ingeniería y Calidad.

4.2 Appearance Zones / **Zonas de Apariencia**

The appearance zones are defined verus car position and are subdivided in three zones as following:

Las zonas de apariencia son definidas de acuerdo a posicion en el carro y son subdivididas en tres zonas a continuación:

A. FUNCTIONAL AREAS / AREAS FUNCIONALES

Functional areas of the pieces, areas where of being NOK, the piece must be discarded immediately.

Areas funcionales de la pieza, zonas donde de ser NOK, la pieza debe ser descrtada inmediatamente.

B. FACE A / CARA A

Areas of the pieces which in the car position perspective, the esthatic conditions are visible at first sight (In front of).

Areas de las piezas que desde la perspectiva de posición del automovil, las condiciones estéticas son visibles a primera vista (frente A).

C. FACE B / CARA B

Areas of the pieces which in the car position perspective, the aesthetic condition are visible at second sight or finding an specific angle (lateral , or next to).

Areas de la pieza que en la perspectiva del automovil, las condiciones estéticas son visibles a segunda vista o encontrado un ángulo específico (lateral o proximo a).

D. FACE C / CARA C

Part of the piece where the aeshtetic conditions are invisible on the car position (generally below and internally).

Partes de la pieza en las que las condiciones estéticas son invisibles en la posicion del carro (generalmente abajo).

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|---------------------|-----------|------------------|-----------|--------|
| PREPARED BY: | DATE | REVIEWED BY: | DATE | |
| QUALITY ENGINEER JR | 21-abr-25 | QUALITY ENGINEER | 21-abr-25 | ISR 11 |
| | | | | REV. 1 |

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4.2 Appearance Zones Continuation / **Zonas de Apariencia Continuación**

E. FACE D / **CARA D (BACKWARD OF A, B and C).**

Backwards of faces "A" in the car position perspective, the aesthetic conditions are invisible (this face is a reference to look for sewing / material specifications).

Al revés de las caras "A" en la perspectiva de la posición del automovil, las condiciones estéticas son invisibles (esta cara es una referencia para buscar costuras / especificaciones de materiales).

4.3 Inspection Conditions / **Condiciones de Inspección**

Any visual inspection must be done according with following inspection conditions

Toda Inspección visual deberá ser bajo las siguientes condiciones de inspección:

Illumination level: aprox: 1000 Lux / Unless other level requested by customer and vlidated versus a standard.

Nivel de Iluminación: 1000 Lux / A menos que sea requerido por cliente otro nivel y respaldado por alguna norma.

Distance from product to operator eye: aprox 50 to 60 cm (one arm distance aprox.) and simulating " Car Position"; otherwise the method will be invalidated.

Distancia del Producto a los ojos del operador: aprox.50 a 60 cm (un brazo de distancia aprox.) y simulando la "Posición del Carro"; caso contrario el método será invalidado.

Regular time to inspect the piece it must be by 6 sec for all the piece. After that the inspection method is invalid.

El tiempo regular de inspección debe ser de 6 segundos para toda la pieza, caso contrario el método sera invalidado.

The inspection area must be free of sharp edges that can damage the piece.

El área de inspección debe estar libre de filos o superficies que puedan dañar la pieza.

This inspection conditions apply also for sewing specification (50 to 60 cm).




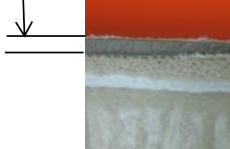
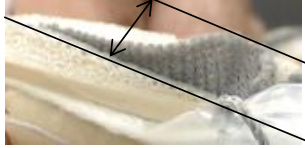



Las condiciones de inspección aplican también para especificaciones de costura (50 a 60 cm).

Cut patterns dimensional study is only valid for the sub-components before the sewing process. Any different method is not recognized.

El estudio dimensional de los patrones de corte solo es válido para los sub-componentes antes del proceso de costura.

No se reconoce ningun otro método diferente.

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|---------------------|-----------|------------------|-----------|--------|
| PREPARED BY: | DATE | REVIEWED BY: | DATE | |
| QUALITY ENGINEER JR | 21-abr-25 | QUALITY ENGINEER | 21-abr-25 | ISR 11 |
| | | | | REV. 1 |

| Characteristic | Specification | Acceptable | Not Acceptable |
|--|--|--|--|
| DIMENSIONAL | | | |
| Join and Deck Width Seam. Ancho de Costura de Unión y Decorativa. | Must be according to whats specified in EOA. Debe ser de acuerdo a lo especificado en EOA. +/- 1mm | Within Spec according to EOA. Dentro de Especificación de acuerdo a EOA.  | Out of specification according to EOA. Fuera de especificación de acuerdo a EOA. |
| Wavy in join seam Costura Ondulada | Max. 1mm in 60mm Max. 1mm en 60mm | Within Spec Dentro de Especificación |  More than 1mm Mas de 1mm |
| Wavy of out stitch Ondulada en costura vista | N/A | Shall be straight Debe ser recta |  More than 2mm Mas de 2 mm |
| Overlap Edges Bordes Sobrepetos | Max. 2mm Max. 2mm | Less Than 2 mm Menos de 2mm  Within 2 mm Dentro de 2mm |  More than 2 mm Mas de 2 mm |
| Notches Alignment Alineación Piquetes | Max. "2mm" Max. 2mm |   |  |

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ISR 11
REV. 1

| Characteristic | Specification | Acceptable | Not Acceptable |
|---|--|---|--|
| DIMENSIONAL | | | |
| SPI Out Stitch (Puntada Deck) | 4mm +/-1 mm 4mm +/-1mm | Must be in Spec Dentro de Especificación | Out of Tolerance Fuera de Tolerancia |
| SPI Bottoms Panels Puntada Bottoms | 10 Stitches in 25 +/- 1 Stitch 10 Puntadas en 25 mm +/- 1 Puntada | Must be in Spec Dentro de Especificación | Out of Tolerance Fuera de Tolerancia |
| SPI Body /Sides /Back Panels Puntada Body/Sides/ Back | 10 Stitches in 40 +/- 1 Stitch 10 Puntadas en 40 mm +/- 1 Puntada | Must be in Spec Dentro de Especificación | Out of Tolerance Fuera de Tolerancia |
| Thread tension 500B CTR/RR/FR/OTTOMAN Tensión de Hilo 500B CTR/RR/FR/OTTOMAN | Higher: 13 a 15 N Lower:2.5 a 4.5 N Superior: 13 a 15 N Inferior: 2.5 a 4.5 N | Must be in Spec Dentro de Especificación | Out of Tolerance Fuera de Tolerancia |
| Thread tension 500B AR Tensión de Hilo 500B AR | Higher: 13 a 15 N Lower:2.5 a 4.5 N Superior: 13 a 15 N Inferior: 2.5 a 4.5 N | Must be in Spec Dentro de Especificación | Out of Tolerance Fuera de Tolerancia |
| VISUAL DEFECTS | | | |
| Bulges Issue in pre-join flaps. Solapa levantada | Flaps must be flat Solapas deben estar planas | No Acceptable No Aceptable |  Bulges Issue Solapa Levantada |
| | | |  Sewing Not Flat Costura No plana |

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ISR 11
REV. 1

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| Characteristic | Specification | Acceptable | Not Acceptable |
|--|---|---|--|
| VISUAL DEFECTS | | | |
| Sewing Wrinkles Arrugas de Costura | Not Allowed unless Samples approved by Customer. No Permitido a menos que haya muestra aprobada por Cliente. | Without Wrinkles Sin Arrugas |  |
| Visual Join Stitches Puntadas de Unión Visibles | Not Allowed unless Samples approved by Customer. No Permitido a menos que haya muestra aprobada por Cliente. | Without Visual join Stitches Sin Puntadas de Unión Visibles. |    |
| Loose Stitch Puntada Floja | Not Allowed No Permitida | No Loose Stitch Acceptable No es Aceptable Puntada Floja |  |
| Flaying Thread Hilos Volando | Not Allowed No Permitida | No Flaying Thread Acceptable No es Aceptable Hios Volando. |  |
| Open Seam Costura Abierta | Not Allowed No Permitida | Not Allowed No Permitida |  |

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ISR 11

REV. 1

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| Characteristic | Specification | Acceptable | Not Acceptable |
|--|--|--|--|
| VISUAL DEFECTS | | | |
| Needle Holes Hoyos de Aguja | Not Allowed No Permitidos | Needle Holes Not Acceptables. No es Aceptable Hoyos de Aguja. |  |
| Contamination and/or Foreign Particles Contaminación y/o Partículas Extrañas. | Not Allowed No Permitidos | No Acceptable No Aceptable |  |
| Deck Seam Alignment Alineación Costura Deck | Reference 4mm distance to Join Seam Referencia de 4mm de Distancia a Costura Union. | Within Reference Dentro de Referencia |  4mm Ref. 4mm Ref. |
| Deck Seam Alignment Alineación Costura Deck | | |  Deck seam wavy Not Accpetable. Costura de vista Deck No Aceptable con ola. |

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| Characteristic | Specification | Acceptable | Not Acceptable |
|--|------------------------------|--|---|
| VISUAL DEFECTS | | | |
| Lamination Marks Marcas de Laminación | Not Allowed No Permitidas | Not Acceptable unless Samples approved by Customer. No Aceptable a menos que haya muestra aprobada por Cliente. |  |
| Break Line Lineas de Quiebre | Not Allowed No Permitidas | Not Acceptable unless Samples approved by Customer. No Aceptable a menos que haya muestra aprobada por Cliente. |  |
| Vinyl Line Líneas de Vinil | Not Allowed No Permitidas | Not Acceptable unless Samples approved by Customer. No Aceptable a menos que haya muestra aprobada por Cliente. |  |
| Lamination Waviness Laminación Ondulada | Not Allowed No Permitidas | Not Acceptable unless Samples approved by Customer. No Aceptable a menos que haya muestra aprobada por Cliente. |  |

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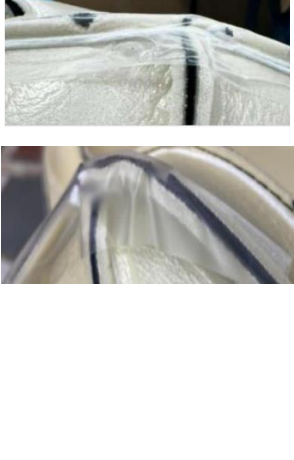
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| Characteristic | Specification | Acceptable | Not Acceptable |
|---------------------|--|--|---|
| <p>9 Velcro sew</p> | <p>Must be present and correct according to EOA. Debe estar presente y correcto de acuerdo a EOA.</p> | <p>Within Spec according to EOA. Dentro de Especificación de acuerdo a EOA.</p>  | <p>Out of specification according to EOA. Fuera de especificación de acuerdo a EOA.</p>  |
| <p>9 Silky Tape</p> | <p>Must be present and correct according to EOA. Debe estar presente y correcto de acuerdo a EOA.</p> | <p>Within Spec according to EOA. Dentro de Especificación de acuerdo a EOA.</p>  | <p>Out of specification according to EOA. Fuera de especificación de acuerdo a EOA.</p>  |

5.0 REFERENCE DOCUMENTS

5.0 DOCUMENTOS DE REFERENCIA

ACR05 Visual Aids

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