Powering Business Worldwide

SM64210
November 2003

Applicable addition manuals:

SM64019 Unisez Non-Valved Coupling
SM60129-1 Hose End Regulator

Aerospace Group
Conveyance Systems Division
Carter® Brand Ground Fueling Equipment

Maintenance & Repair Manual

Overwing / Splash Fill Nozzle

Model 64210

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MAINTENANCE, OVERHAUL & TEST INSTRUCTIONS
CARTER PART NUMBER 64210 OVERWING/SPLASH FUELING NOZZLE

1.0 INTRODUCTION

This manual furnishes instructions covering the maintenance and overhaul of Carter Part Number 64210, Overwing/ Splash Fueling Nozzle.

2.0 EQUIPMENT DESCRIPTION

The Carter Ground Fueling part number 64210, Overwing/Splash Fueling Nozzle is a standard overwing/splash fill nozzle that has special connections to allow it to be connected to a Carter 60129-1 type Hose End Control Valve (HECV) that limits the inlet pressure to the nozzle to 15 psi. In addition a Carter 2" Unisex Coupling is used as the inlet connecting devise.

3.0 DISASSEMBLY

3.1 Remove nozzle from end of hose at the Unisex Coupling by twisting the two mating couplings counter-clockwise. There will be some trapped fuel in the nozzle and hose so do this operation over a container to collect the fuel.

3.2 HECV and Unisex Coupling portion of the Nozzle Assembly - For more detailed information of overhaul and repair refer to appropriate service manual for the HECV and the Unisex Coupling used on the basic nozzle. Some additions and changes to these manuals are noted as follows:

SERVICE MANUAL	DESCRIPTION	MANUAL AVAILABILITY
SM60129-1	Hose End Control Valve (HECV)	These manuals are available on the Argo-Tech web site (see http://www.argo-tech.com/groundfueling.aspx). Click on "Downloads" and then go to "Nozzles" and click on SM60129-1. SM64019 can be found under Unisex Couplings. They are also available directly from Carter via e-mail request to groundfueling @argo-tech.com or through any Carter distributor.
SM64019	Unisex Coupling	

3.2.1 SM60129-1 HECV – Use the manual as noted therein except for the following items or steps:

3.2.1.1 Item 6, 6A or 6B Spring shown in SM60129-1 is replaced with part number 10626. All other parts and procedures for overhauling or repairing this part of the unit remain the same.

3.2.1.2 Adapter 221669-1 is used to adapt the HECV to fit the ¾" FNPT thread on the nozzle. The connecting bolts and the seal between this adapter and the HECV are a part of and shown in the SM60129-1 Manual.

3.2.2 SM64019 Unisex Coupling – Use the manual as noted therein to overhaul or repair the Non-valved Unisex Coupling used on this nozzle with the following additions not shown therein:

3.2.2.1 Items 1-28 shown in the SM64019 Manual represent the basic 64019 Unisex Coupling that is used on this nozzle. The parts for connecting the coupling to the 221686-1 Adapter are a part of and shown in the manual.

3.2.2.2 The parts used to connect the adapter to the HECV are 6 each GF16995-49

Screws, 5710-63-30 Washers and one 201201-151 O-ring.

3.2.2.3 If so desired the entire Unisex Coupling with adapter items (4-8) to mate to the HECV may be procured as part number 47534.

3.3 Automatic Nozzle portion of the assembly – The overhaul and repair of the basic automatic nozzle is not recommended. Special tools and testing capabilities required do not warrant the cost. It is more economic to replace it as an assembly when needed. A complete nozzle may be procured under Carter part number 47526.

3.4 Bonding Cable for the assembly – The bonding cable used on the nozzle attaches under the head of one of the screws used to connect the HECV Adapter 221669-1. It is available as a replacement part as part number 47528.

4.0 INSPECTION

It is recommended that all parts noted in both SM60129-1 and SM64019 under Inspection be discarded and replaced with new parts. In addition it is recommended that item 8, 201201-151 O-ring also be replaced when assembled. If the automatic nozzle item 1 is faulty replace it with a new one. If the cable on the Bonding Cable Assembly item 9 is frayed or defective replace it with a new one also.

5.0 REASSEMBLY

Follow reassembly procedures in SM60129-1 and SM64019. To achieve final assembly use the following steps:

5.1 Attach the HECV (3) to the Adapter (2) making sure that the Bonding Cable (9) is attached under one of the screws.

5.2 Use 1-1.5 wraps of Teflon tape or other suitable pipe lubricant on the male pipe threads on the Adapter (2). If Telfon tape is used do not exceed 1.5 wraps to prevent possible cracking of the nozzle port.

5.3 Screw the assembly into the nozzle port until tight.

5.4 Attach the 64019 Unisex Coupling (4) to the Adapter (7) as noted in SM64019, paragraph 6.9 and 6.10 using the Adapter (7) in lieu of the Inlets (4-7) as noted therein.

5.5 Attach the completed assembly to the HECV (3) using the O-ring (8) and the 6 sets of screws (5) and washers (6).

5.6 If testing facilities are available, pressurize the inlet to 15 psig with the nozzle closed and check for any external leakage. This can be accomplished with either unleaded gasoline or air pressure. If air is used, submerge the entire unit in a test solvent to check for air leakage. Precaution should be used when testing with air to make sure that personnel are fully protected from any possible rupture.

6.0 ILLUSTRATED PARTS CATALOG

Table 1.0 tabulates the parts and sub-assemblies comprising the 64210 Overwing/Splash Fueling Nozzle. The item numbers of the table are keyed to the view of the nozzle diagrammed in Figure 1.The column headed by “Spares/10 Units/Yr.” represents our best estimate as to the spare parts needed to support 10 basic nozzles for a one-year period.

TABLE 1

Item No.	Part Number	Description	Qty per Assembly	Spares/10 Units/Yr.
1	47526	Nozzle – Automatic Shutoff	1	-
2	221669-1	Adapter, HECV to nozzle	1	-
3	47527	HECV, 15-psi limitation	1	-
4	47534	Unisex Coupling, non-valved	1	-
5	GF16995-49	Screw	6	-
6	5710-63-30	Washer	6	-
7	221686-1	Adapter	1	-
8	201201-151	O-ring	1	10
9	47528	Bonding Cable Assembly	1	-

Notes:

1. All part numbers beginning with "GF" are interchangeable with those beginning with either "AN" or "MS". If three numbers follow the “GF” it is interchangeable with an "AN" part; otherwise it is interchangeable with an "MS" part of the same number.
2. Kits are available to overhaul both the HECV (3) and Unisex Coupling (4) as noted in the respective service manuals. For the Unisex Coupling use KD64019-5 to obtain the necessary parts including item 8 above. Use KD60129-1 for the HECV (3).

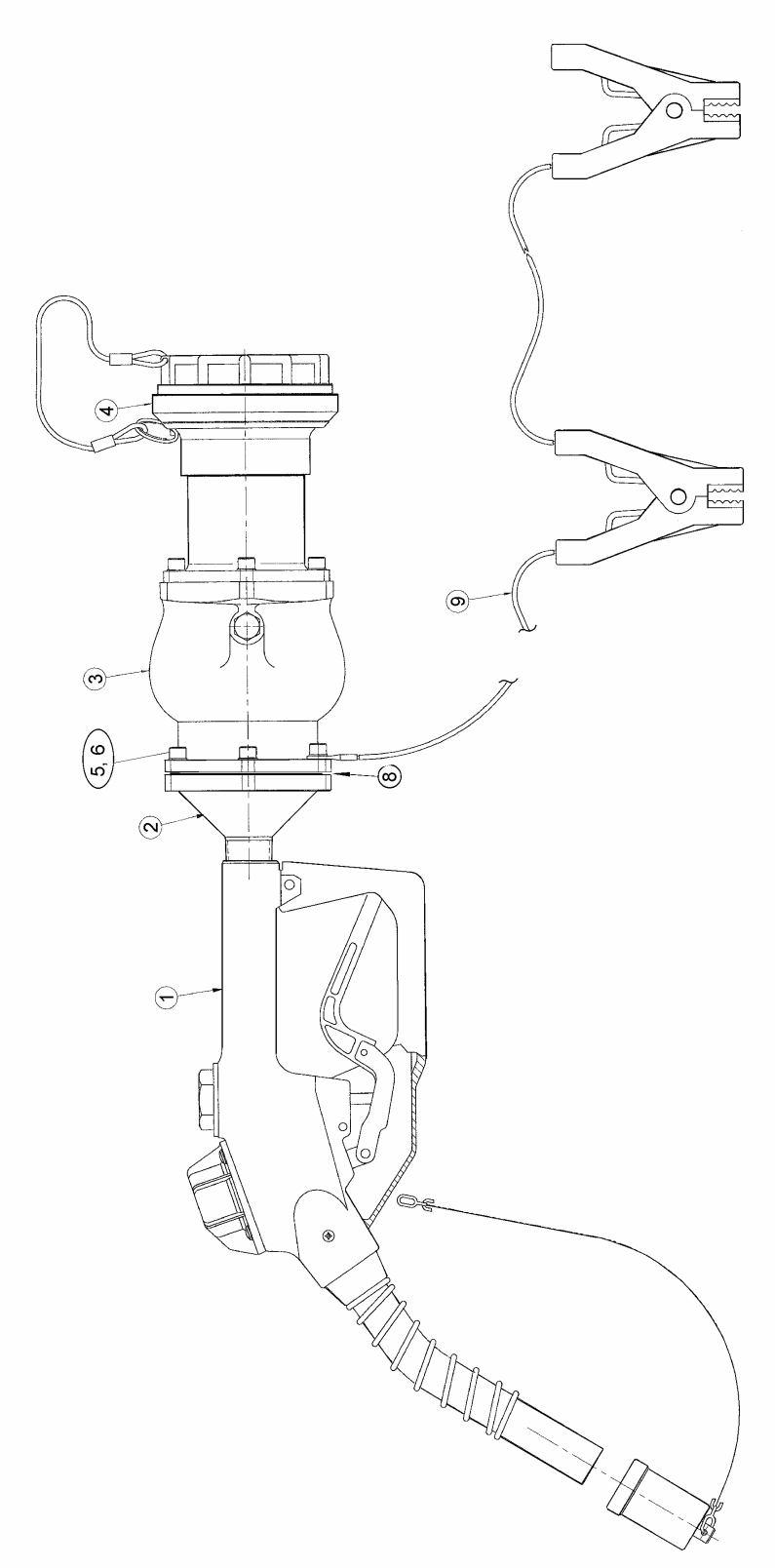

FIGURE 1 – 64210 OVERWING/SPLASH FILL NOZZLE

OPW INSTALLATION INSTRUCTIONS

H-9491-PA
SEPTEMBER, 1999
SEPTIEMBRE, 1999
REV. APRIL 2002

7H, 7HB, 11A & 11B
SERIES AUTOMATIC NOZZLES

PISTOLAS AUTOMATICAS SERIES 7H, 7HB, 11A Y 11B

These instructions define the proper installation, operation, and maintenance for OPW 7H, 7HB, 11A & 11B nozzles.

WARNINGS:
- High flow rates in excess of the regulatory allowable rates may result in splash back or spillage. Damage or injury may result.
- Ensure nozzle is properly engaged in fill pipe prior to fueling. *(Figure 1)* Some fill pipe designs prohibit proper retention of the nozzle. In such case, nozzle must be hand held to prevent it from falling out of the fill pipe. Failure may result in a hazardous spill.
- For converting an OPW nozzle from full-serve to self-serve see back page, otherwise do not alter the trigger or rack mechanisms. The nozzle shut off mechanism could be impaired and result in property damage and/or personal injury.
- Do not remove spout without OPW replacement kits and/or instructions. Improper parts or assembly may result in leakage or a hazardous condition.
- If the spout is removed or replaced for any reason, the nozzle must be retested in accordance with "Preparation and Test" section of these instructions.
- Never smoke, allow open flame, or sparking devices near the product dispensers.
- Keep gasoline away from eyes and skin.
- Keep gasoline out of reach of children. *(Figure 2)*
- Test can must be grounded at all times during tests.
- Nozzles are limited to applications consistent with NFPA Code 30A, OSHA CFR1940.106, state and local fire codes or other local regulations. This nozzle is designed for use with fuels normally dispensed at commercial service stations.
- OPW products should be used in compliance with applicable Federal, State, and Local laws and regulations. Product selection should be based on physical specifications, limitations and compatibility with the materials to be handled. OPW makes no warranty of fitness for a particular use.

INSTALLATION
- Apply suitable thread sealant on male threads of hose or swivel. (OPW recommends Loctite 567).
- **DO NOT USE TEFLON TAPE.** ***(Figure 3)***
- Insert hose into inlet of nozzle. *(Figure 4)*
- Engage male thread into nozzle body and tighten the hose nut. *(Figure 5)*
- Do not over tighten.

PREPARATION AND TEST
- All 11A, 11B, 7H and 7HB nozzles are 100% flow, shutoff and leak tested prior to shipment.
- Each nozzle should be tested for proper operation prior to being put into service.
- 11A and 11B: Minimum dispensing flow rate is three (3) gallons per minute (gpm) with the nozzle lever held in the full position.
- 7H and 7HB: Minimum dispensing flow rate is five (5) gallons per minute (gpm) with the nozzle lever held in the full open position.
- Each nozzle hose point should be checked for minimum flow rate and shut off in all clip positions.

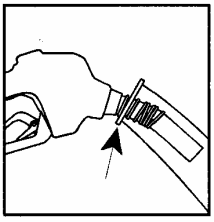
FIGURE 1/FIGURA 1


FIGURE 2/FIGURA 2

FIGURE 3/FIGURA 3

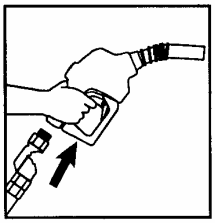
FIGURE 4/FIGURA 4

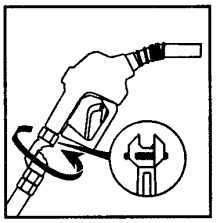
FIGURE 5/FIGURA 5

Estas instrucciones definen la instalación, operación y mantenimiento correcto de las pistolas 7H, 7HB, 11A y 11B.

ADVERTENCIAS:
- Un flujo mayor a el permitido por las regulaciones puede salpicar y causar derrames, resultando en daños y perjuicios.
- Asegúrese que la pistola esté introducida completamente en el tubo de llenado antes empezar el llenado. *(Figura 1)* Ciertos diseños de tubos de llenado no permiten el posicionamiento adecuado de la pistola. En esos casos, la pistola deberá ser sujetada con la mano para evitar que se caiga del tubo de llenado. Si se cayera, causaría un derrame peligroso.
- Vea la última página si necesita convertir una pistola OPW de servicio completo a autoservicio, de lo contrario no altere el gatillo o el soporte. Esto resultaría en fallas al mecanismo de paro automático de la pistola.
- No remueva el tubo de descarga de la pistola sin tener las partes de repuesto y/o las instrucciones de OPW. Partes o ensamblaje incorrecto o armado incorrecto puede causar fugas y situaciones peligrosas.
- Si el tubo de descarga es removido o reemplazado por cualquier motivo, la pistola debe ser sometida a pruebas de acuerdo con la sección "Preparación y Pruebas" de estas instrucciones.
- Nunca fume, permita llamas o aparatos que emitan chispas cerca del dispensario de productos.
- Mantenga la gasolina lejos de sus ojos y piel.
- Mantenga la gasolina fuera del alcance de los niños. *(Figura 2)*
- El recipiente de pruebas debe estar con conexión a tierra en todo momento durante las pruebas de flujo.
- El uso de la pistola debe estar limitado a aplicaciones consistentes con el código 30A de NFPA, CFR1940.106 de OSHA y códigos de incendios locales y estatales u otras regulaciones locales. Esta pistola ha sido diseñada para ser usada con combustibles normalmente dispensados en estaciones de servicio comerciales.
- Los productos OPW deben usarse cumpliendo con las leyes y disposiciones legales de cada país. La selección de cada producto deberá basarse en las especificaciones y limitaciones físicas, así como la compatibilidad de los mismos con los materiales a ser manejados. OPW no otorgará la garantia en caso de modificación alguna para usos particulares.

INSTALACION
- Aplique sellador de tubos a el enrosque macho de la manguera (OPW recomienda Loctite 567).
- **No use cinta teflón.** ***(Figura 3)***
- Inserte la manguera en el extremo de entrada de la pistola. *(Figura 4)*
- Conecte el enrosque macho al cuerpo de la pistola y apriete la tuerca de la manguera. *(Figura 5)*
- No sobre apriete.

PREPARACION Y PRUEBAS
- Antes de mandarlas, se comprueba todas las pistolas 11A, 11B, 7H y 7HB para averiguar que el flujo, el cierre automático y el escape de cada boquilla funcionen perfectamente.
- Cada pistola debe ser probada antes de ser puesta en servicio para aseguarse que funcione correctamente.
- 11A y 11B: El flujo mínimo de descarga del sistema dispensario debe ser de tres (3) galones por minuto (11.4 litros por minuto) con el gatillo de la pistola en posición completamente abierta.
- 7H y 7HB: El flujo mínimo de descarga del sistema dispensario debe ser de cinco (5) galones por minuto (18.9 litros por minuto) con el gatillo de la pistola en posición completamente abierta.
- Cada punto de la manguera de la pistola debe ser inspeccionado para asegurarse que existe caudal mínimo y cierre automático en cada posición de el gatillo.

FLOW TEST
- Equipment required: stop watch
  (Figure 6) 5 gallon vented test can
- Start watch and initiate flow together.
- Test can should fill in under 60 seconds.
- If hose point does not comply, check system and repair prior to putting hose point in service.

SHUT OFF CHECK
- Equipment: 5 gallon test can
- Start flow into test can, place nozzle in low clip position. *(Figure 7)*
- Immerse nozzle spout in test can with at least two inches of gas covering the spout. *(Figure 8)* Do not place nozzle tip against bottom of container.
- Nozzle must shut off.
- Repeat procedure for medium and high clip positions. Nozzle must always shut off. *(Figure 9)*
- Models without hold-open racks, test at full open position only.
- If shut off occurs prior to filling tank, reduce flow.
- Filling speed varies with style of fill pipe and vehicle.
- If no shut off occurs, verify flow rate is greater than 3 gpm for 11A/11B, and 5 gpm for 7H/7HB. Flow rates below this will not allow the automatic shut off feature to operate properly. If flow rate is above 3 and 5 gpm and there is no shut off, replace nozzle.

NOZZLE CARE AND MAINTENANCE
- Monthly, apply a few drops of light oil (such as 3-in-1) where the main stem extends through the nozzle body.
- Spare part kits available from your OPW distributor include: - 5B series spout kits
  - 6B, 6H, and 6S series hand insulators
  - 18K series hold open rack kits

CONVERTING AN OPW NOZZLE FROM FULL SERVE TO SELF SERVE (Figure 10)
- All OPW 11B and 7HB Series nozzles come with a hold open lever and rack.
- If local codes require that the nozzle cannot have a hold open latch, please follow these instructions to remove it: Place the nozzle on a flat surface, hold lever in open position and slide screw driver along side hold-open rack. Pry the rack upward and pop off the rivets. CAUTION: Protect your face and other exposed body parts–wear safety glasses. Make sure that broken rivets are removed from the guard. Throw old parts away.

NOTICE TO INSTALLER
- Present these instructions to the station manager or other operational personnel.

IMPORTANT
- For safety, OPW 11B and 7HB are designed to be non-operational unless hose is pressurized; therefore, should the customer attempt to open the lever before the pump is zeroed and switch turned on, the customer will not receive fuel. A loose nozzle lever is normal until the hose is pressurized.

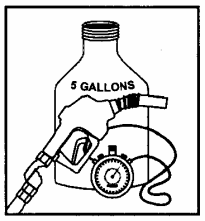

FIGURE 6/FIGURA 6

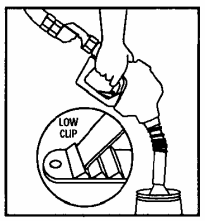

FIGURE 7/FIGURA 7

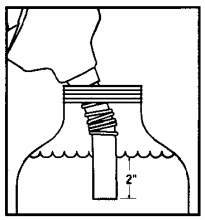

FIGURE 8/FIGURA 8

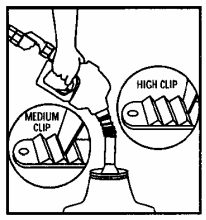

FIGURE 9/FIGURA 9

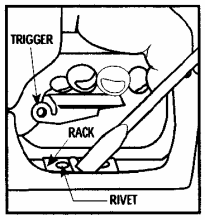

FIGURE 10/FIGURA 10

PRUEBA DE FLUJO
- Equipo necesario: cronómetro
  recipiente venteado de 5 galones para gasolina. *(Figura 6)*
- Comience a contar el tiempo cuando inicie el flujo.
- El recipiente de pruebas debe llenarse antes de pasar 60 segundos.
- Si el punto de la manguera no lo logra, inspeccione el sistema y repárelo antes de poner la manguera en servicio.

PRUEBA DE CIERRE
- Equipo: recipiente de 5 galones para prueba.
- Comience a descargar el flujo en el recipiente de prueba con el gatillo de la pistola en posición baja. *(Figura 7)*
- Inmersa el tubo de descarga en el recipiente, asegurándose que por lo menos dos pulgadas de gasolina cubren el tubo. *(Figura 8)*
- La pistola se debe cerrar.
- Repita el procedimiento con el gatillo en la posición del medio y de abertura total. La pistola se debe cerrar siempre. *(Figura 9)*
- Para mantener abiertas pistolas sin soporte, conduzca la prueba con el gatillo totalmente abierto.
- Si se produce cierre antes de llenar el recipiente, reduzca el flujo. La mejor velocidad de llenado varía con el estilo de tubo de llenado y vehículo.
- Si no se produce cierre verifique que el flujo sea mayor de 3 y 5 gpm. Flujos por debajo de 3 gpm (11A/11B) y 5 gpm (7H/7HB) no permitirán que el sistema de cierre automático funcione correctamente. Si el flujo es mayor de 3 y 5 gpm y aún asi no se produce cierre, reemplace la pistola.

CUIDADO Y MANTENIMIENTO DE LA PISTOLA
- Cada mes, aplique unas gotitas de aceite ligero (tal como 3-en-1) en el lugar donde el vástago principal se extiende del cuerpo de la pistola.
- Partes de repuesto son obtenibles a través de su distribuidor de OPW e incluyen:
  - Juego de tubo de descarga serie 5B
  - Cobertores de pistolas series 6B, 6H, 6S
  - Juegos de soporte serie 18K para mantener abierta la pistola

CONVERSION DE UNA PISTOLA OPW DE SERVICIO COMPLETO PARA AUTSERVICIO (Figura 10)
- Todas las pistolas OPW Serie 7HB y 11B vienen con gatillos para mantener la abierta.
- Si códigos locales requieren que la pistola no tenga un mecanismo para mantenerla abierta, por favor refiérase a las siguientes instrucciones para removerlo. Posicione la pistola en una superficie plana, sostenga la palanca en la posición abierta e inserte un destornillador a lo largo del soporte de apertura levantándolo y liberándolo de los remaches. PRECAUCION: Protéjase la cara y otras partes expuestas del cuerpo. Use anteojos de seguridad. Asegúrese que los remaches hayan sido totalmente removidos. Deseche las partes usadas.

NOTA PARA EL INSTALADOR
- Entrege estas instrucciones al gerente de la estación o a la persona encargada del mantenimiento.

IMPORTANTE
- Por seguridad, las pistolas OPW 11B, 7H están diseñadas para no-funcionar a menos que la manguera este bajo presión. Por esta razón, si su cliente intenta usar la pistola antes de que el dispensará gasolina. Es normal que la palanca de la pistola este "floja" cuando la manguera no esta bajo presión.

OPW warrants that products sold by it are free from defects in materials and workmanship for a period of one year from the date of manufacture by OPW (ECO products two years from date of manufacture.) Proof of purchase may be required. As the exclusive remedy under this limited warranty, OPW will at its sole discretion, repair, replace, or issue credit for future orders on any product that may prove defective within the one year date of manufacture period (repairs, replacements, or credits may be subject to prorated warranty for remainder of the original warranty period, complete proper warranty claim documentation required.) This warranty shall not apply to any product that has been altered in any way, which has been repaired by any other than a service representative authorized by OPW, or when failure is due to misuse, or improper installation or maintenance. OPW shall have no liability whatsoever for special, incidental, or consequential damages to any party, and shall have no liability for the cost of labor, freight, excavation, clean-up, downtime, removal, reinstallation, loss of profit, or any other cost or charges.
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Los productos de OPW comprenden una garantía contra defectos en sus materiales y/o por defectos de fabricación por el período de un año (Los productos ECO tienen dos años de garantía) el cual comienza a contar desde la fecha de embarque al salir de la planta de OPW. Si algún producto presentara algún defecto en sus materiales y/o por defecto de fabricación dentro del período de garantía, el producto de que se trate será reemplazado o reparado según el problema de que se trate o bien, se emitirá una nota de crédito para aplicarse a alguna orden futura, según el juicio de OPW. Esta garantía no tendrá validez si el producto reclamado en garantía presente señales de haber sido alterado o dañado previamente al reclamo o bien no haya sido revisado por algún representante autorizado por OPW al presentar la falla, además no se aceptará el reclamo de garantía del producto si es que la falla se deba por abuso o por mal uso del mismo por haberse utilizado en condiciones diferentes de operación a la cual fue diseñado.
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