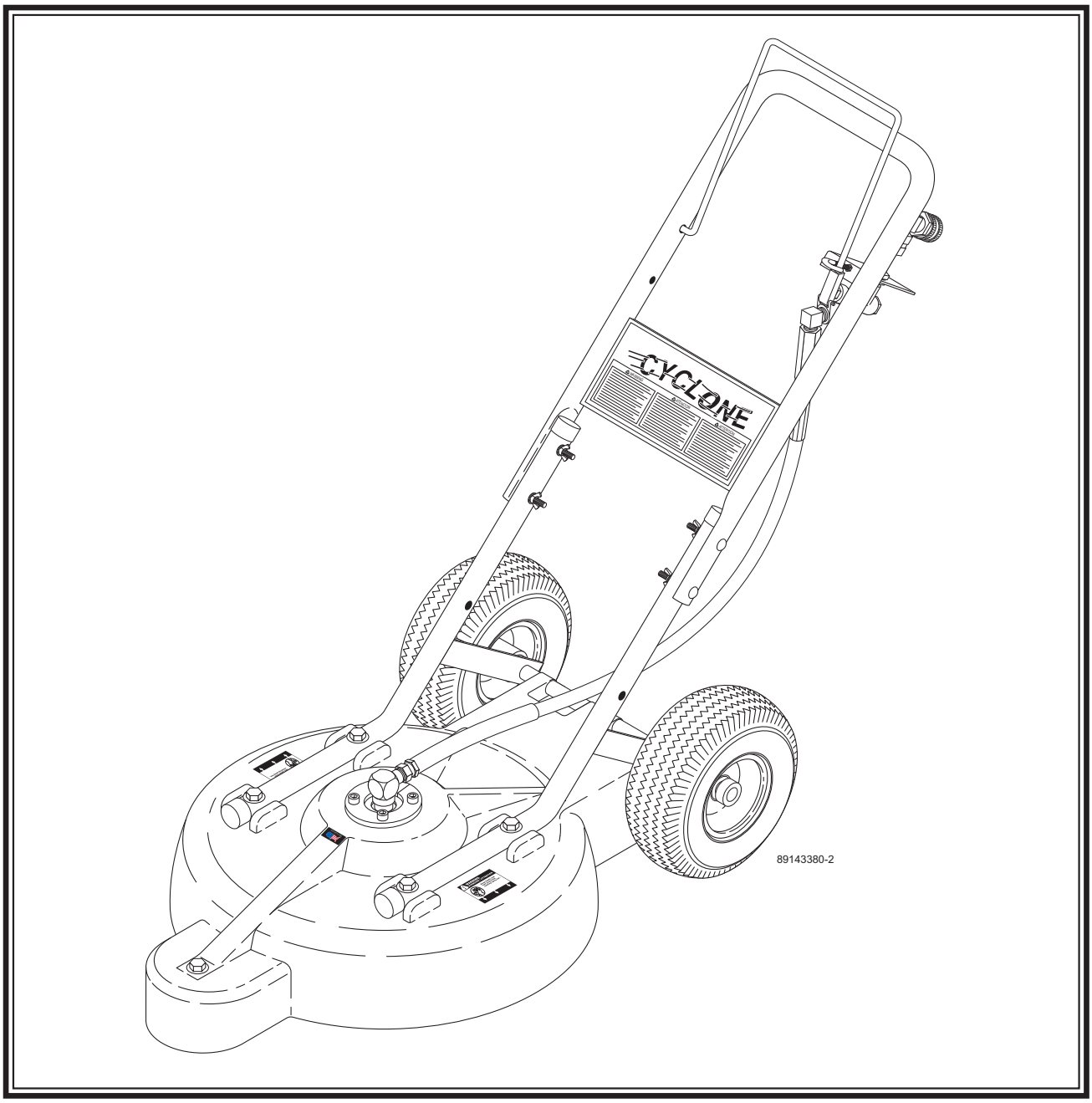
CYCLONE

OPERATING INSTRUCTIONS AND PARTS MANUAL



For technical assistance or the Dealer nearest you, call (360) 833-1600

8.914-338.0 - B 04/09/25

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Spanish 10-12

Model Number 8.903-608.0 _____

Serial Number _____

Date of Purchase _____

The model and serial numbers will be found on a decal attached to the Cyclone. You should record both serial number and date of purchase and keep in a safe place for future reference.

INTRODUCTION

The Cyclone is designed to attach to a pressure washer which rotates two high pressure nozzles in the Cyclone. The nozzles produce spray as well as determine the size of the swath when cleaning surfaces such as parking lots, driveways and sidewalks.

Owner/User Responsibility:

The owner and/or user must have an understanding of the manufacturer's operating instructions and warnings before using this Cyclone. Warning information should be emphasized and understood. If the operator is not fluent in English, the manufacturer's instructions and warnings shall be read to and discussed with the operator in the operator's native language by the purchaser/owner, making sure that the operator comprehends its contents.

Owner and/or user must study and maintain for future reference the manufacturers' instructions.

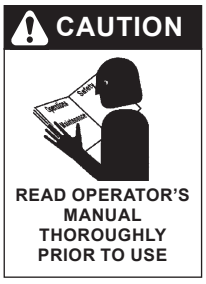
SAVE THESE INSTRUCTIONS

This manual should be considered a permanent part of the machine and should remain with it if machine is resold.

When ordering parts, please specify model and serial number. Use only identical replacement parts.

This machine is to be used only by trained operators.

IMPORTANT SAFETY INFORMATION



CAUTION: To reduce the risk of injury, read operating instructions carefully before using.

1. Read the owner's manual thoroughly. Failure to follow instructions could cause malfunction of the machine and result in death, serious bodily injury and/or property damage.



WARNING: High pressure stream of fluid that equipment can produce can pierce skin and its underlying tissues, leading to serious injury.

2. High pressure developed by these machines will cause personal injury or equipment damage. Use caution when operating. Do not direct discharge stream at people or animals or severe injury or death will result.
3. Never make adjustments on machine while it is in operation.
4. Eye safety devices and foot protection must be worn when using this equipment.
5. The best insurance against an accident is precaution and knowledge of the machine.
6. Never expose any parts of the body, such as feet or fingers, to the underside of base when spray arms are rotating. Never tilt or attempt to work on underside of base while pressure washer is running or spray arms are rotating.



WARNING: High pressure spray can cause paint chips or other particles to become airborne and fly at high speeds.

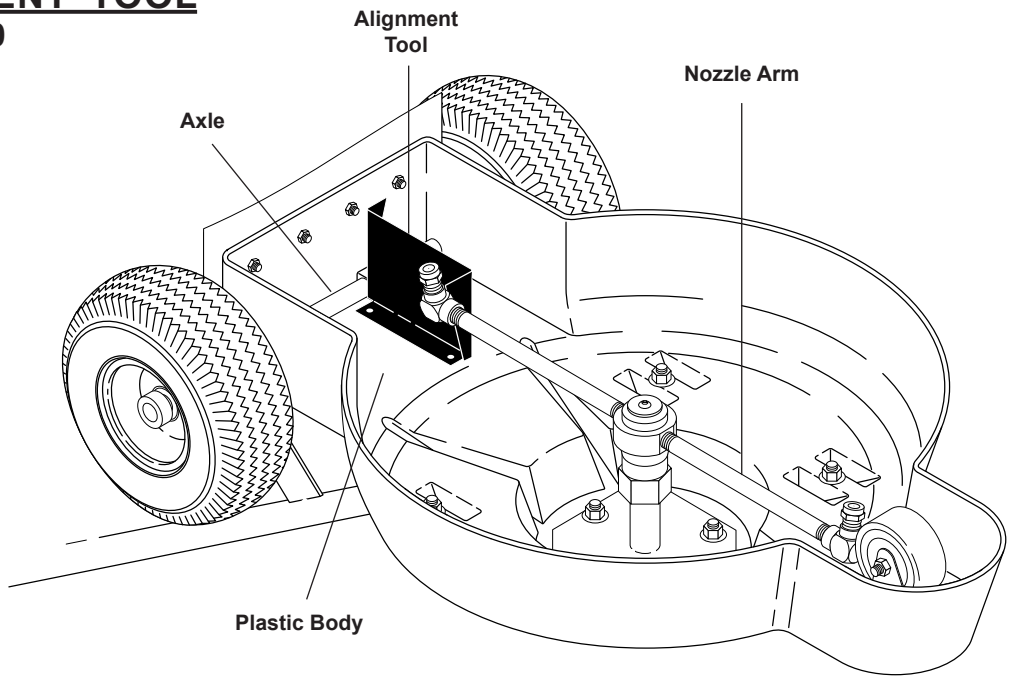
7. Safety clothing and protective eye covering must be worn.
8. The Cyclone comes equipped with two #3 nozzles in the rotating swivel.Check your machine nozzle size before using.
9. We will not be liable for any alterations made to our standard machines, or the application of any components not purchased from us.
10. Pressure must NOT exceed 4,000 PSI. Temperature must NOT exceed 200°F. Flow rate must NOT exceed 6 GPM.
11. To protect from freezing, squeeze the trigger lever after you turn off the pressure washer and have disconnected the high pressure hose from the Cyclone. This will allow water to drain through the nozzles.

GENERAL OPERATING TECHNIQUES

1. Disconnect pressure washer spray gun from high pressure hose. These items are not included, but are provided with the soon to be attached pressure washer.
2. Attach the female nipple, supplied with the Cyclone, to the pressure washer high pressure hose. **NOTE: We recommend using no mar hose to prevent black marks from appearing on the cleaning surface.**
3. Couple pressure washer high pressure hose to Cyclone.
4. Inspect your pressure washer nozzle size. The Cyclone surface cleaner comes with two #3 nozzles. If your pressure washer requires a nozzle larger than a #6, consult with your local dealer.

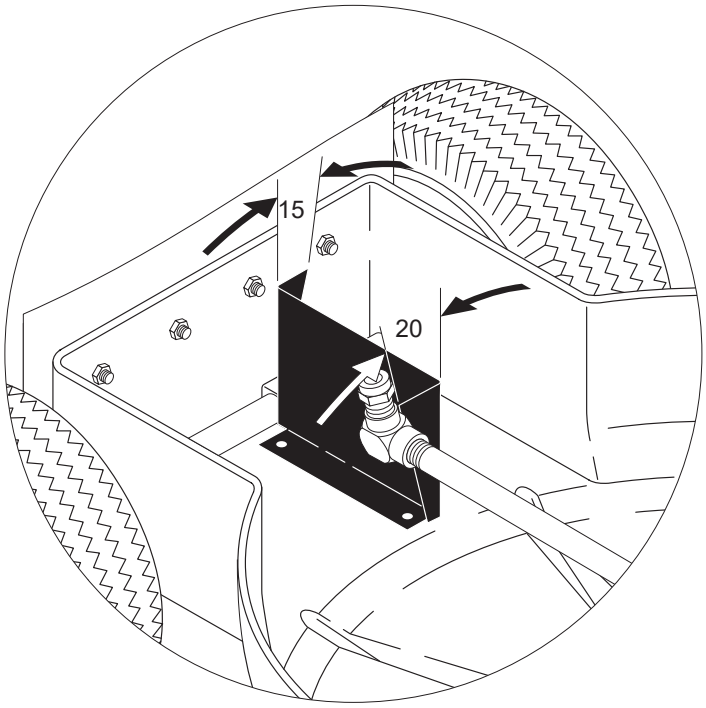
   NOTE: For ideal cleaning, the Cyclone must be attached to a minimum 4 gpm at 3,000 psi pressure washer.
5. Turn on water supply and start pressure washer.
6. Pull the trigger for water to start cleaning surface. **NOTE: Never stop moving the Cyclone while trigger is engaged and surface is being sprayed or damage to surface could occur.**

ALIGNMENT TOOL
8.912-854.0



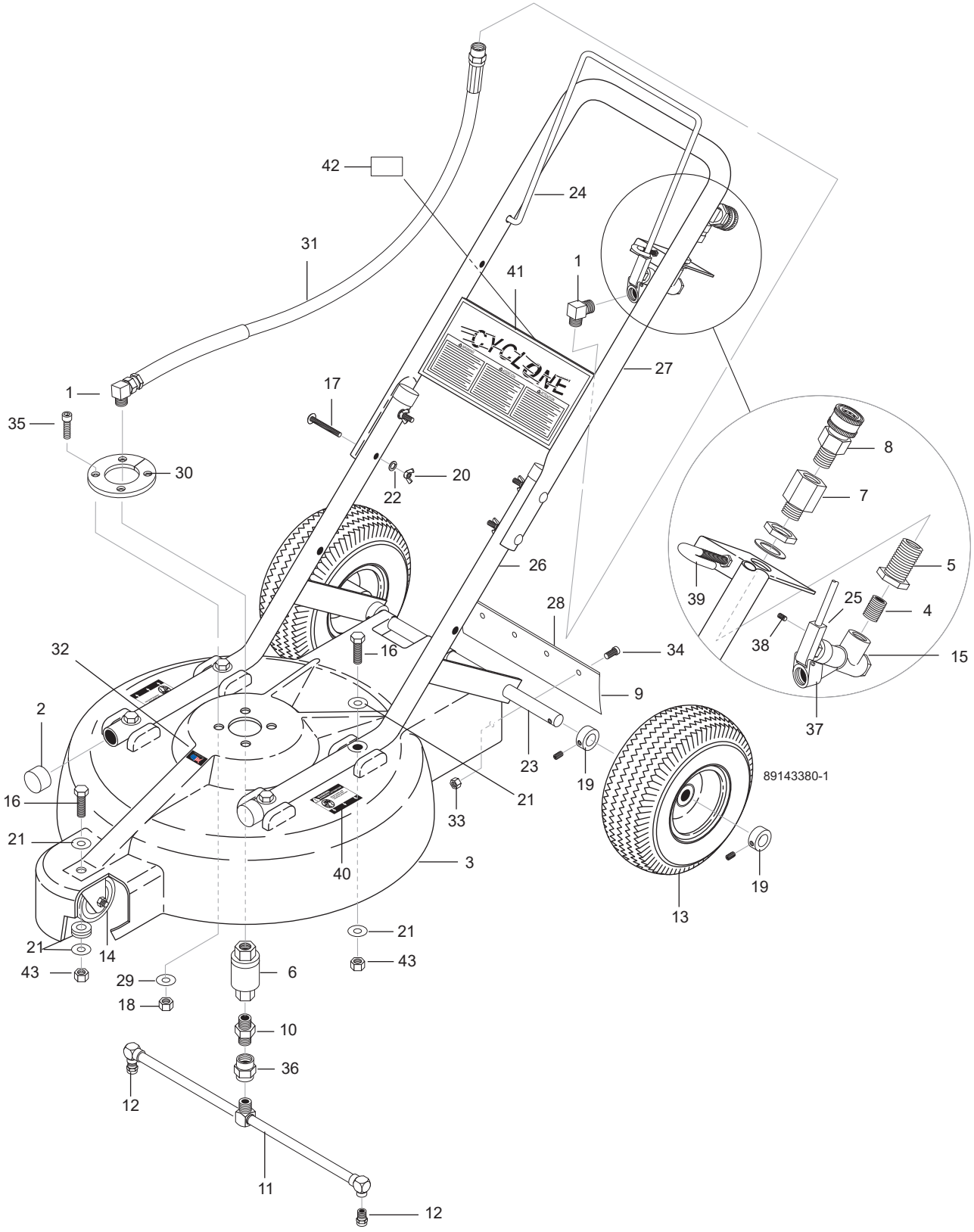
STEP 1: **Disconnect water to Cyclone, then turn entire machine over to allow access to nozzle jets.**

STEP 2: **Place base of alignment tool flat against bottom of Cyclone plastic body. Press end of tool (opposite of desired angle) against axle, then rotate nozzle arm to alignment tool as shown.**



STEP 3: **Use either the 20° or the 15° end of tool, adjust nozzle to align with angled surface of tool. NOTE: 20° is the factory setting. Nozzles can be set at 15° if a slower rotational speed is desired.**

EXPLODED VIEW



EXPLODED VIEW
PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY
1	8.706-200.0	Elbow, 1/4", Street P/N-TF3409X4	2
2	8.706-560.0	Cap, Black Vinyl	4
3	8.751-362.0	Base, Polyethylene, Black	1
4	8.705-969.0	Nipple, 1/4" Close Sch 80 Steel	1
5	8.706-999.0	Connector, 1/4" Anchor	1
6	8.751-358.0	Rotary Swivel Assy	1
7	8.706-301.0	Adapter, 1/4 x 3/8	1
8	9.802-169.0	Coupler, 3/8" Male Brass	1
9	8.707-387.0	Guard, Splash	1
10	8.705-973.0	Nipple	1
11	8.725-311.0	Assy, Arm, Rotary Spray	2
12	8.711-370.0	Nozzle Only, SA, 1/4", MEG-1503	2
13	8.754-186.0	QH Wheel ASSY, 10" Gray Steel Rim W/Tub	2
14	8.711-908.0	Wheel, Caster 3 Grey	1
15	8.718-244.0	Valve, Actuator, Assy	1
16	9.802-726.0	Bolt, 3/8" x 1-3/4", HH NC Stainless	5
17	8.718-727.0	Screw, 1/4" x 2" Carriage, ZN	4
18	9.802-777.0	Nut, 5/16" Stainless, ESNA NC	4
19	9.802-782.0	Collar, 5/8" Bore Shaft 3010	6
20	8.718-880.0	Nut, Wing 1/4-20 ZN	4
21	9.802-808.0	Washer, 3/8", SAE, Stainless Steel	13
22	8.719-019.0	Washer, Split-Lock 1/4" ZN	4
23	8.912-849.0	Axle, 5/8" x 18.5", Stainless	1
24	8.931-483.0	Trigger Bar Yellow	1
25	8.719-966.0	Adapter, Valve, Trigger Bar	1
26	8.912-851.0	Handle, Lower Assy	2
27	8.912-852.0	Handle, Upper Assy	1
28	8.912-853.0	Plate, Backup, Splash Guard	1
29	9.802-805.0	Washer, 5/16" Flat, SAE, SS	4
30	8.751-359.0	Split Ring,	1
31	8.918-419.0	Hose, 3/8" x 34" Pressure, 1/2" FJIC x 1/4" FNPT	1
32	8.900-313.0	Label, Assembled in USA	1
33	9.802-696.0	Nut, 10/32" NF ST ST KEP	4
34	8.718-653.0	Screw, 10/32" x 1/2" SHCS SS	4
35	8.751-444.0	Screw, 5/16-18 x 1-1/4, SHCS, SS	4
36	8.705-364.0	Coupling	1
37	8.719-069.0	Pin, Roll M2.5" x 24 mm 5395A277	1
38	8.718-951.0	Screw, 10/32" x 1/4" SS,	1
39	8.719-101.0	Hook, 10/24" x 2"	1
	8.718-857.0	▲ Nut, 10/24" HEX, Whiz Loc M/S Zinc	2
40	8.900-222.0	Label, Warning	2
41	8.900-915.0	Label, Cyclone	1
42	9.800-034.0	Label, Clear Lexan	1
43	9.802-780.0	Nut, 3/8" ESNA SS	5

▲ Not Shown

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
QUICK COUPLER LEAKS	Worn O-ring	Replace O-ring (9.802-100.0)
PRESSURE WASHER UNLOADER CYCLES	High pressure filter or wrong sized nozzles for attached pressure washer	Remove and clean out filter, nozzle(s). Check nozzle size.
NOZZLE ASSEMBLY SPINNING TOO SLOW OR TOO FAST	Nozzles are angled incorrectly	Readjust nozzles. **NOTE:** More angle means faster rotation. Angle to about 30°.
NOZZLE SPINNING TOO SLOW	Not enough water volume for attached pressure washer to rotate nozzles	Need a larger gpm pressure washer.
NOT CLEANING SURFACE	Nozzle angle wrong or pressure washer too small for job	Change nozzle angle or attach to larger pressure washer.

NOZZLE CHART

Correct nozzle size is important for optimum cleaning efficiency. The Cyclone is shipped with two #3, 15° nozzles in rotary swivel. Review correct nozzle size for your pressure washer. See chart below for correct nozzle size. To obtain the correct nozzle size in the rotary swivel, divide the minimum nozzle size for the pressure by two. Round this figure up to the nearest half nozzle size. These are the 1/8" nozzles only (two needed) for the rotary swivel on the Cyclone.

Nozzle Size	Orifice diam. (in.)	40 PSI	100 PSI	250 PSI	500 PSI	600 PSI	700 PSI	800 PSI	1000 PSI	1200 PSI	1500 PSI	2000 PSI	2500 PSI	3000 PSI	3500 PSI	4000 PSI
2	.034	.20	.32	.50	.71	.77	.80	.89	1.0	1.1	1.2	1.4	1.6	1.7	1.9	2.0
3	.042	.30	.47	.75	1.07	1.16	1.25	1.34	1.5	1.6	1.8	2.1	2.4	2.6	2.8	3.0
4	.052	.40	.63	1.00	1.40	1.60	1.70	1.80	2.0	2.2	2.5	2.8	3.1	3.5	3.8	4.0
4.5	.055	.45	.71	1.10	1.50	1.70	1.90	2.00	2.2	2.4	2.8	3.0	3.6	3.9	4.3	5.0
5	.057	.50	.79	1.30	1.80	1.90	2.10	2.20	2.5	2.8	3.1	3.6	4.0	4.4	4.7	5.0
5.5	.06	.55	.87	1.40	1.90	2.10	2.30	2.50	2.8	3	3.4	3.8	4.4	4.8	5.2	5.5
6	.062	.60	.95	1.50	2.10	2.30	2.50	2.70	3.0	3.2	3.7	4.2	4.8	5.2	5.7	6.0
6.5	.064	.65	1.00	1.70	2.30	2.50	2.70	2.90	3.3	3.6	4.0	4.6	5.2	5.7	6.0	
7	.067	.70	1.10	1.80	2.50	2.70	2.90	3.10	3.5	3.8	4.3	5.0	5.6			
7.5	.07	.75	1.20	1.90	2.70	2.90	3.20	3.40	3.8	4.1	4.6	5.3	6.0			
8	.072	.80	1.30	2.00	2.80	3.10	3.40	3.60	4.0	4.4	5.0	5.6				
8.5	.074	.85	1.30	2.20	3.00	3.30	3.60	3.80	4.3	4.6	5.3	6.0				
9	.076	.90	1.40	2.30	3.20	3.50	3.80	4.00	4.5	5.0	5.5					
9.5	.078	.95	1.50	2.40	3.40	3.70	4.00	4.30	4.8	532	5.8					
10	.08	1.00	1.60	2.50	3.50	3.90	4.20	4.50	5.0	5.4						
12	.087	1.20	1.90	3.00	4.20	4.60	5.00	5.40	6.0							
15	.094	1.50	2.40	3.80	5.30	5.80										
20	.109	2.00	3.20	5.00												
30	.141	3.00	4.70													
40	.156	4.00														

Cyclone System

WARRANTY

LIMITED MINIMUM 90 DAY WARRANTY

We warrant to the original consumer that each new part and accessory sold by Kärcher North America (KNA) will be free from manufacturing defects in materials or workmanship in normal service for the duration specified by the original component manufacturer with a 90 day minimum from date of purchase, provided it is installed properly and the equipment is maintained in accordance with KNA's instructions and manuals. Components manufactured by KNA, such as frames and handles, have a one year warranty from date of purchase.

Our obligation under this warranty is expressly limited as to the replacement or repair, at our option, at KNA, Camas, Washington 98607, or at a service facility designated by us, for such part or parts as inspection shall disclose to have been defective.

EXCLUSIONS:

This warranty does not apply to defects caused by casualty or unreasonable use, including faulty repairs by others and failure to provide reasonable and necessary maintenance.

THE FOLLOWING ITEMS ARE NOT COVERED BY THIS WARRANTY:

WE SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND, including but not limited to labor costs or transportation charges in connection with the replacement or repair of defective parts.

ANY IMPLIED OR STATUTORY WARRANTIES, INCLUDING WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. We make no other express warranty, nor is anyone authorized to make any on our behalf.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

TO OBTAIN WARRANTY SERVICE:

Purchaser must bring the accessory parts to an authorized KNA Dealership. For the dealership nearest you write:
Kärcher North America, 4275 NW Pacific Rim Blvd, Camas, WA 98607.

INTRODUCCION

El Sistema de Cyclone de agua está diseñado para adaptarse a una lavadora de presión haciendo rotar dos boquillas de alta presión para producir el rociado y así mismo determinar el tamaño del ancho de corte cuando se limpian superficies de playas de estacionamiento, pistas de acceso y veredas.

Responsabilidad del Dueño/Usuario

El dueño/usuario debe entender las instrucciones de operación y las advertencias del fabricante antes de usar el Sistema de Chorro de agua. La información de advertencia debe ser enfatizada y entendida. Si el operador no habla inglés, las instrucciones y advertencias del fabricante deberán ser leídas y discutidas en la lengua nativa del operador por el comprador/dueño, asegurándose que el operador entienda su contenido.

El dueño y/o usuario deben estudiar y mantener las instrucciones del fabricante para futuras referencias.

CUIDAR ESTAS INSTRUCCIONES

Este manual debe ser considerado una parte permanente de la máquina y debe quedarse consigo si máquina es revendida. Al ordenar las partes, especifican por modelo y número de serie. Utilice repuestos sólo idénticos. Esta máquina debe ser utilizada solamente por los operadores entrenados.



SEGURIDAD DE LA MAQUINA

ADVERTENCIA: Para reducir el riesgo de accidentes, leer cuidadosamente las instrucciones de operación antes de usar la unidad.

1. Leer cuidadosamente el manual deldel operador. El incumplimiento de las instrucciones puede causar unoperación defectuosa e inadecuada de la unidad y puede provocar la muerte, causar heridas serias y/o daños a la propiedad.



ADVERTENCIA: El flujo de líquido de alta presión del equipo puede producir perforaciones en los tejidos de la piel, causando heridas graves.

2. La alta presión desarrollada por estas unidades causará accidentes personales o dañosal equipo. Sea precavido al operar. No descargar el flujo directamente en personas o animales ya que puede causar heridas graves o la muerte.

3. Nunca hacer ajustes a la máquina mientras esté operando.

4. Deben usarse accesorios de seguridad para los ojos y protección de los pies cuando se use este equipo.

5. El mejor seguro contra un accidente es la precaución y el conocimiento de la máquina.

6. Nunca diriga la varilla del chorro de agua a cualquier parte de su cuerpo o alguna persona a 10 pies de distancia ya que podría producir heridas graves.



ADVERTENCIA: El chorro de alta presión puede ocasionar que trozos de pintura y otras partículas vuelen por los aires a altas velocidades.

7. Debe usarse ropa de seguridad y protección para los ojos.

8. El ensamble del Sistema de chorro de agua viene equipado con una boquilla #6 en la pistola de apagado y dos boquillas #3 en la placa giratoria. Revise la boquilla de su equipo antes de usarlo.

9. No seremos responsable por cualquier cambio hecho a nuestras unidades estándar o la aplicación de cualquier otro componente no comprado de nosotros.

10. La presión NO debe exceder 4,000 PSI. La temperatura NO debe exceder 200°F.

11. Para protegerla del congelamiento, apriete la palanca del disparador después de apagar la máquina para lavado a presión y después de haber desconectado el tubo flexible de alta presión de Cyclone. Esto permitirá que el agua desagüe a través de los tubos flexibles.

TECNICAS GENERALES DE OPERACION

1. Desconectar la pistola de alta presión de la manguera de alta presión. Estos artículos no se incluyen, pero serán provistos cuando se requieran acoplar a la lavadora de presión.

2. Conectar la boquilla hembra, incluída con la lavadora, a la manguera de agua de alta presión.

   NOTA: Recomendamos no usar manguera tipo mar para prevenir que aparezcan marcas negras en la superficie que se está limpiando.

3. Acoplar la manguera de alta presión de la lavadora al Sistema de chorro de agua.

4. Inspeccionar el tamaño de la boquilla de la lavadora de presión. El Sistema de chorro de agua viene con dos boquillas #3. Si su lavador de presión requiere una boquilla más grande que la #6, consulte con su vendedor local.

NOTA: Para un lavado ideal, el Sistema de chorro de agua debe adaptarse a un lavador de un mínimo de 4 gpm y 3,000 psi de presión.

5. Prender el suministro de agua y arrancar la lavadora de presión.

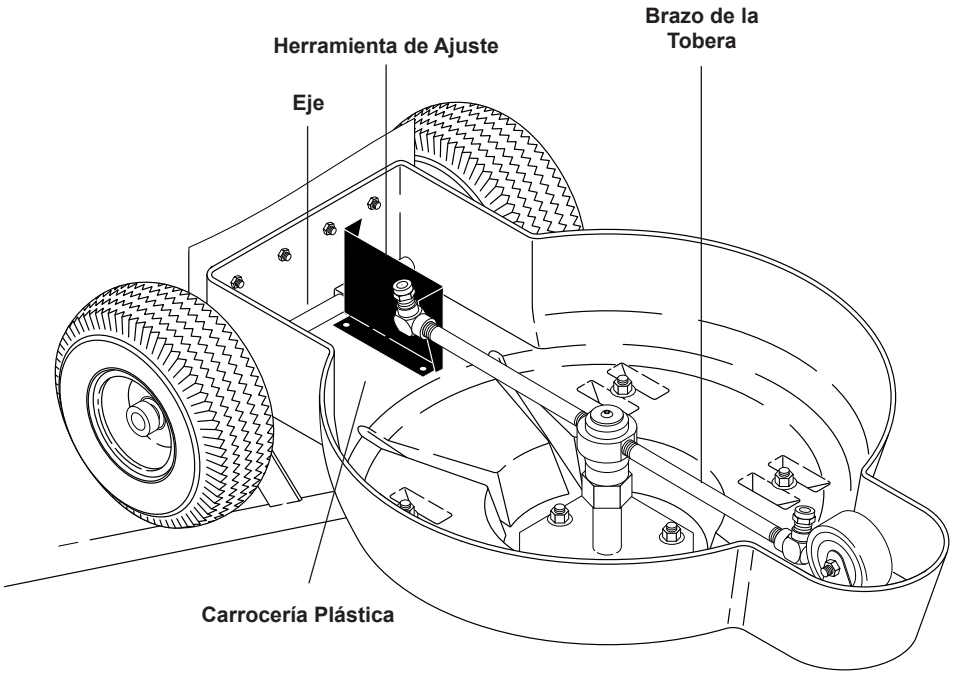
   NOTA: Siempre es importante probar en una área pequeña para la correcta regulación de la altura necesaria de tal manera que la superficie a ser limpiada no sea dañada.

6. Tirar del gatillo para que el agua empiece a limpiar la superficie.

   NOTA: Nunca deje de mover el Sistema de chorro de agua mientras el gatillo está accionado y la superficie está siendo limpiada o podrían ocurrir daños en la superficie.

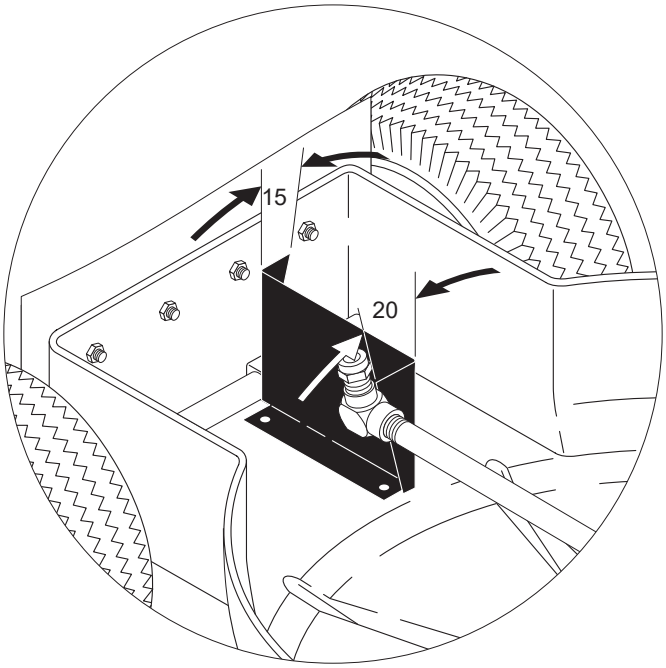
HERRAMIENTA DE ALINEAMIENTO

8.912-854.0



PASO 1: Desconecte el agua de Cyclone, luego gire la máquina completa para permitir el acceso a las toberas de chorro.

PASO 2: Coloque la base de la herramienta de ajuste plana contra la parte inferior de la carrocería plástica de Cyclone. Presione el extremo de la herramienta (opuesto al ángulo deseado) contra el eje y luego gire el brazo de la tobera hacia la herramienta de ajuste tal como se muestra.



PASO 3: Utilizando el extremo de la herramienta en 20° o en 15°, ajuste la tobera para alinearla con la superficie en ángulo de la herramienta. **NOTA:** 20° es ajuste de fábrica. Las toberas se pueden fijar en 15° si desea una velocidad de rotación más despacio.

Cyclone System

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