Use less water every wash

Simple practices, maintenance checks and retrofit kits that lower water usage and cost across the tunnel. Here are the highlights.

Savings at a glance

Retrofit kits

01
AVERAGE OF
2.6 gal/car
Install underbody retrofit kit

02
AVERAGE OF
2.43 gal/car
Reduce rain bar rows and injector size

03
UP TO
0.92 gal/combo
Add check valves to combo leg assemblies

04
SAVES
0.03 gal/car
Reduce Tire Gloss injector

Quick maintenance wins

05
RECOVER UP TO
176 gal
Close or lower upper reject Jobe float

06
PREVENT UP TO
4.5 gal
Inspect and replace check valves

07
SET TO
+2 GPG
Set water softener hardness correctly

08
CHECK
All injectors
Confirm injector setup

Daily practices

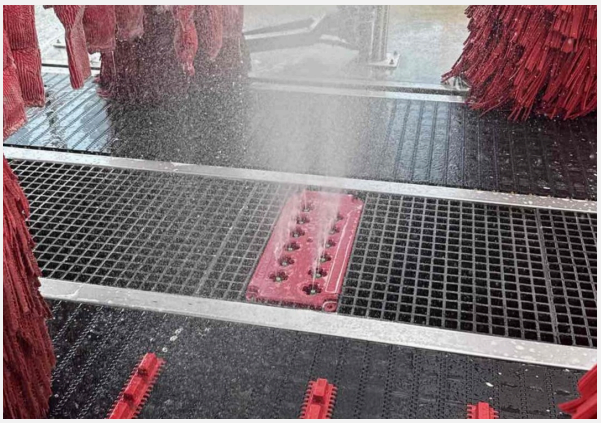
09
COSTS UP TO
50¢ /min
Limit fire hose use

10
TAKE
2 readings/day
Record water meter readings

Savings based on national averages. Actual savings vary by site. Test sites: Hudsonville, Byron Center, World Model, Cascade, Clyde Park and Caledonia.

01 · RETROFIT KIT

Install underbody retrofit kit



AVERAGE OF

2.6 gal/car

About **$2,870 per year** in water cost, based on national averages

Who should order: Sites without a Water Treatment Center.

Option	Part number	Description	
1 (preferred)	P-SE-2618	40010 angle body valve retrofit kit – aims to prevent valve weeping	P-SE-2618 install guide ›
2	P-WAT-3502-K	Asco valve reclaim retrofit kit	Installation instructions ›

02 · RETROFIT KIT

Reduce rain bar rows and injector size



AVERAGE OF

2.43 gal/car

Up to about **$2,680 per year**, based on national averages. Actual savings depend on pulse count and belt speed.

Rinse arch flow rates for Red Hot Cleanser and Ceramic Body Wax can be reduced while maintaining wash quality.

Function	Change	Avg. savings
Ceramic Body Wax prerinse	8 GPM to 5.5 GPM injector	0.98 gal/car
Red Hot Cleanser prerinse	8 GPM to 3.25 GPM injector with a one-row rain bar	1.45 gal/car

Option	Part number	Description
1 – two-row rain bar	P-CHE-2169	5.5 GPM injector for Versadial
	P-HFI-202-1-5.5	5.5 GPM non-Versadial injector
2 – one-row rain bar	P-CHE-2170	3.25 GPM injector for Versadial
	P-HFI-202-1-3.2	3.25 GPM non-Versadial injector
	E-F-RB-1-LR1-A	One-row rain bar

03 · RETROFIT KIT

Add check valves to combo leg assemblies



UP TO

0.92 gal/combo

kept from draining between cars

Each assembly's foam generator, stainless manifold body and fittings hold about 0.23 gal. With four assemblies per combo, adding three check valves per assembly retains up to 0.92 gal per combo. Testing confirmed the added check valves have minimal effect on foam production.

Qty	Part number	Description
12	P-CHE-2150	4 lb diaphragm check valve
16	P-WAT-2097	½ in. x ¼ in. PVC reducer bushing
12	P-WAT-3800	¼ in. PVC close nipple

04 · RETROFIT KIT

Reduce Tire Gloss injector



SAVES

0.03 gal/car

About **$33 per year**, based on national averages

Switching the Tire Gloss injector from 1.5 GPM to 1.0 GPM also delivers more concentrated, consistent detergent application on the tire.

Keep brush coverage: To maintain solid detergent coverage on the brush, remove and plug the nozzle closest to the wash exit.

Qty	Part number	Description
1	P-HFI-202-1-1	1.0 GPM non-Versadial injector
2	P-WAT-2132	¼ in. NPT pipe plug

05 · QUICK MAINTENANCE WIN

Close or lower upper reject Jobe float

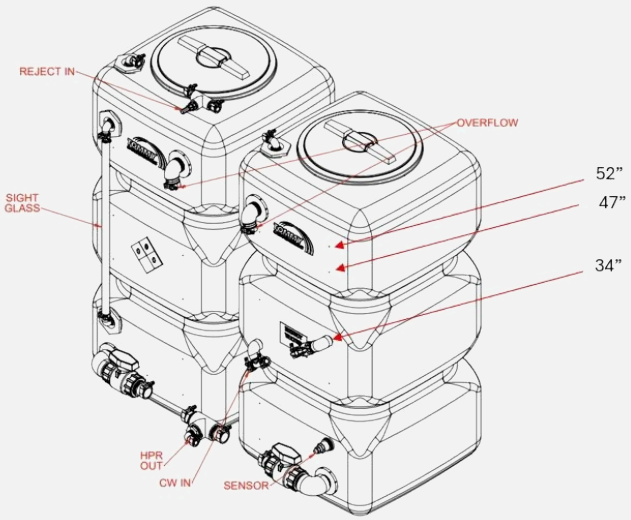


UP TO

176 gal

of reject water storage recovered on an E-WT-REJECT-1000-T-A assembly with the float set at 52 in.

When the upper Jobe float is left wide open, city water fills space that should hold reject water. Closing the float completely, or moving it closer to the lower float, keeps that capacity available for reject water.



E-WT-REJECT-1000-T-A with upper float heights

Tank	Upper float height	Storage between floats
E-RO-400RST-T-A	Standard	84 gal
E-WT-REJECT-1000-T-A	52 in.	176 gal
	47 in.	145 gal
	34 in.	56 gal

Heights measured from the ground to the center of the valve.

Parts and instructions

For 210-gal tanks, Zendesk has retrofit instructions covering the parts and procedure for lowering the upper Jobe float.
Jobe float retrofit instructions ›

> **Pro tip:** Install a clear overflow line on both the RO and reject tanks. It makes overflow easy to spot and helps you monitor the effect of the upper Jobe float setting.

06 · QUICK MAINTENANCE WIN

Inspect and replace check valves



PREVENT UP TO

4.5 gal

from draining out of arches through leaking check valves

A single leaking check valve can drain the contents of an entire arch, so inspect them often.

Potential loss per arch

Arch	Water type	Up to
Triple Presoak arches	City water and detergent	2.4 gal
Tommy Guard applicator	City water and detergent	0.6 gal
Spot Free Rinse	RO water	0.5 gal
High-Pressure Rinse	Reject water	0.5 gal
Curved hanging rinse	City water and detergent	0.3 gal
Wrap foaming manifold assembly	City water and detergent	0.2 gal

Choose the right valve

Part number	Description	Use on
P-CHE-2150	4 lb diaphragm check valve	Presoak, combos and specialty arches
P-CHE-2203	8 lb diaphragm check valve	High-Pressure Rinse and Spot Free Rinse arches, for higher cracking pressure and added reliability

07 · QUICK MAINTENANCE WIN

Set water softener hardness correctly



SET SOFTENERS

+2 GPG

above incoming city hardness. About **0.16 gal/car** saved in the example below.

An incorrect hardness setting triggers unnecessary regenerations, and every extra regen sends city water down the drain.

Tommy Duplex Water Softener System

- Test incoming water hardness weekly to confirm mineral levels have not changed. Water hardness test guide ›
- If hardness changes, update the softener setting to **2 GPG above** the incoming city hardness so the softeners stay ahead of saturation. Install and support guide ›

Culligan softener systems

Contact your local Culligan representative for recommended settings based on the hardness in your area.

Required part

Qty	Part number	Description
1	P-SE-2178	Water hardness test kit

EXAMPLE

In a week with 5,875 cars and 174,000 gal of city water, a softener correctly set to 11 GPG regenerates **six times**. The same softener set to 15 GPG regenerates **eight times**. Those two extra regens use **960 gal**, or about 0.16 gal/car.

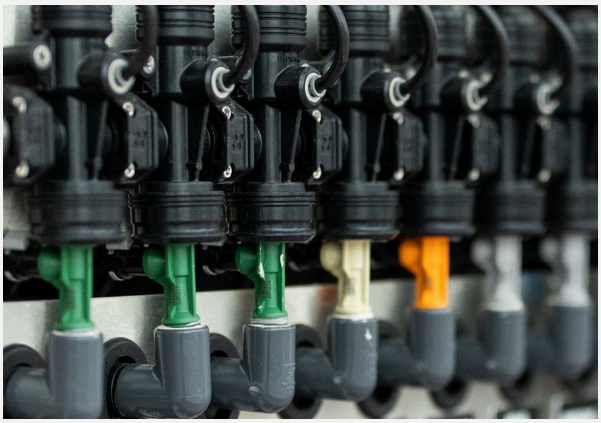
Gallons softened per regen by incoming hardness

Hardness (GPG)	Gal/regen	Difference
8	37,500	–
9	33,333	4,167
10	30,000	3,333
11	27,273	2,727
12	25,000	2,273
13	23,077	1,923
14	21,429	1,648
15	20,000	1,429
16	18,750	1,250
17	17,647	1,103
18	16,667	980
19	15,789	877
20	15,000	789
21	14,286	714
22	13,636	649

Savings depend on how far the setting is from actual incoming hardness.

08 · QUICK MAINTENANCE WIN

Confirm injector setup



CHECK

All injectors

against the current standard setup

Verify every injector matches the standard setup below. Matching each function to its tip keeps it at the intended flow rate.

Standard injector setup

Function	Tip color	GPM	Notes
Front Presoak	Grey	**Dual 2.0**	
Front Bumper Blaster	Grey	**2.0**	
Presoak	Grey	**2.0**	22 on Versadial, 25 PSI air
Rear Presoak	Grey	**2.0**	
Rear Bumper Blaster	Grey	**2.0**	
CTA 1	Orange	**1.5**	
CTA 2	Tan	**0.75**	
Rainbow Coat	Dark green	**5.5**	
Combo 1, Leg 1	Dark green	**5.5**	
Combo 1, Leg 2	Dark green	**5.5**	
Red Hot Cleanser prerinse	Dark green	**3.25**	Install one-row rain bar
Red Hot Cleanser	Dark green	**5.5**	
Combo 2, Leg 1	Dark green	**5.5**	
Combo 2, Leg 2	Dark green	**5.5**	
Ceramic Body Wax prerinse	Dark green	**5.5**	
Ceramic Body Wax	Dark green	**5.5**	
Tommy Guard	Light green	**3.25**	
Drying agent	Blue	**2.25**	
Tire Gloss	Red	**1.0**	Current nozzle setup; plug nozzle closest to exit
Bug spray	Orange	**1.5**	

09 · DAILY PRACTICE

Limit fire hose use



CAN COST UP TO

50¢ /min

in city water, based on field observations

The fire hose is a valuable tool for spraying down the wash, but it is also a common source of city water waste. **Keep fire hose use to a minimum.**

Use the fire hose only to:

- Spray down the wash about once per hour, adjusted for site conditions.
- Flush brushes after especially muddy vehicles.

Shut it off as soon as the job is done.

10 · DAILY PRACTICE

Record water meter readings



TAKE

2 readings a day

at open and close

A daily log shows the impact of every change in this bulletin.

- Photograph the water meter at open, before any activity, and again after cleaning at close.
- Overnight differences reveal leaks early.
- Daily readings plus car counts give an approximate gal/car figure to track over time.