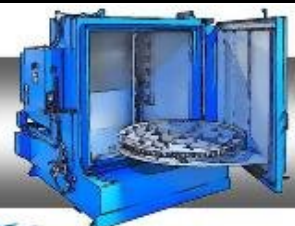


Did You Know...

information you can use



Maintaining the Proper Chemical Concentration

Recommended Initial Chemical Charge STINGRAY® Parts Washers

STINGRAY Model	Turntable Diameter Inches	Reservoir Gallons	POWDER		LIQUID			
			PK I & PK II		PK II L, PK III L, PK IV & PK V			
			7 oz/gal	5.2% concentration	7 oz/gal	5.5% concentration		
		Pounds	50 lb Pail	400 lb Drum	Gallons	5 gallon Pail	55 gallon Drum	
30	30	130	56.9	1.1		7.1	1.4	
40-01	41	180	78.8	1.6		9.8	2	
40-02	41	227	99.3	2		12.4	2.5	
52	52	312	136.5	2.7		17.1	3.4	
60-01	60	350	153.1	3.1		19.1	3.8	
60-02	60	397	173.7	3.5		21.7	4.3	
DL60	60	450	196.9	3.9	0.49	24.6	4.9	0.45
72	72	600	262.5	5.3	0.66	32.8	6.6	0.6
72	72	650	284.4	5.7	0.71	35.5	7.1	0.65
84	84	740	323.8	6.5	0.81	40.5	8.1	0.74
100	100	920	402.5	8.1	1.01	50.3	10.1	0.91
120-02	120	905	395.9	7.9	0.99	49.5	9.9	0.9
120-04	120	945	413.4	8.3	1.03	51.7	10.3	0.94

Refer to our Recommended Initial Chemical Chart on www.marttechservices.com, or above, and after you have determined an effective chemical concentration, you must monitor and maintain it for optimal parts cleaning results and parts washer performance.

Initially, you could start by monitoring the parts washer chemical concentration daily, then weekly (or every 40 hours of washer operation). However, you should develop a monitoring schedule based on the frequency of the washer operation, degree of parts cleanliness required, the types of soils to be removed from parts, and so on. Your monitoring schedule should account for all the variables in your washing application in order to give you the best cleaning results, while using the least amount of washer chemical possible.

There are several methods to test the washer chemical concentration and maintain the proper chemical charge. One is a titration test.

Titration Test

Perform this test to determine the concentration of parts washer chemical by titrating the alkalinity of the solution with an indicator and a drop



count. The results determine the number of ounces of washer chemical to add per gallon of water-capacity.

Titration is the estimation of the strength of a compound by measuring the amount of another compound of known strength that is required to produce an observable reaction.

Almost all titration kits supplied with cleaning chemicals and soaps use phenolphthalein (indicator P) as a reactant, and an acid (hydrochloric or phosphoric) as a neutralizer. The indicator P turns red, pink or blue when added to a sample of the parts washer solution. By counting the drops of acid it takes to turn the washer solution back to its original color, you can arrive at a good estimate of the chemical concentration in your washer.



Titration Testing Guidelines:

- Perform a titration test weekly.
- Contact your chemical supplier for titration test kits.
- Use a kit designed specifically for your chemical.
- Follow test kit instructions.
- Add chemical based on the results of the test.

When you perform a titration test, do the following:

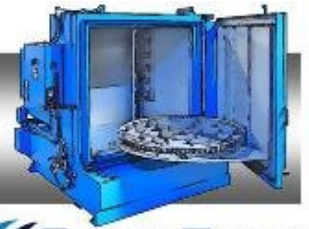
1. Allow the sample solution to cool to room temperature.
2. Filter the cooled solution to remove impurities and make it clear enough to see the color change.
3. Hold the titration reagents vertical when you add drops to the sample. This ensures "size accuracy" of the drops coming out of the reagent bottles.
4. Use clean laboratory flasks, vials, and bottles for all titration tests. Dirty tools can produce invalid test results
5. After testing the sample, pour it back into the washer.

MART
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(800) 543-6278
www.marttechservices.com

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Our offices are open M-F from
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Parts Washers
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(Maintaining the Proper Chemical Concentration, continued)

For Improved testing accuracy:

1. Prepare a “control” sample using fresh city water and chemical to the desired concentration. Note: City water can have minerals or be acidic, requiring more washer chemicals to be added than you might expect to reach the desired alkalinity. Part of the washer chemical is being consumed to treat your incoming water supply. In some cases a De-mineralized or RO water supply can be used to reduce chemical usage, improve bath life and reduce sludge build-up.
2. Titrate the “control” sample.
3. Compare titrations of the wash solution to the results of the “control” in order to determine if you need to add chemical.



Links to the specific instructions for each MART Tech Service Part Washer Chemical Titration Test Kit are below:

[POWER KLEEN TITRATION TEST INSTRUCTIONS](#)

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