

Application: Remove water soluble coolant and light soils	Date: 12/4/2023
Serial number: 1080-0923	Machine model: RI-7200
Machine type: Rotary Indexing	Industry: Automotive

Customer summary:	Customer is a manufacturer of pistons for conventional fuel as well as more obscure applications like ammonia, hydrogen, and methanol.
Item to clean:	Friction welded Pistons, Machine will accommodate up to an 8" diameter x 8" high piston. Heaviest piston weighs 11.3 kg or approximately 24.9 lbs.
Contamination:	Water soluble machine coolant and other light soils
Cleanliness requirement:	Visually clean. Would like max partial size of less than 100 x 100 Microns. Per testing at Alliance, Alliance cannot guarantee cleanliness of less than 100 x 100 Microns. Note: cooling gallery holes are plugged during machining.
Dryness requirement:	As dry as possible. However, some residual moisture may remain in the deep cavity on top of pistons and ring groove areas
Production rate:	Steeltex pistons (two) 200,000/yr and ST/STU190 pistons 13,000/yr. Total, 213,000/52 weeks/yr = 4,096/wk. It is desired to process weekly volume in approximately 23 hours = 2.968 pistons/hr or 20.21 seconds per piston.
Process parameters:	Wash and regenerative blowoff

Customer background:

Customer produces pistons for conventional fuel as well as applications like ammonia, hydrogen and methanol.

Challenge:

Customer wanted water soluble coolant and other light oils removed from the pistons.

Solution:

Alliance provided an Aquamaster RI-7200 rotary indexing machine with a wash and regenerative blowoff that was capable of removing the water soluble coolant and light soils from the pistons.

Cleaning Method:



Caption A



Caption B



Caption C