

Dryer configuration CWP 8000 Synergy

1.) General description

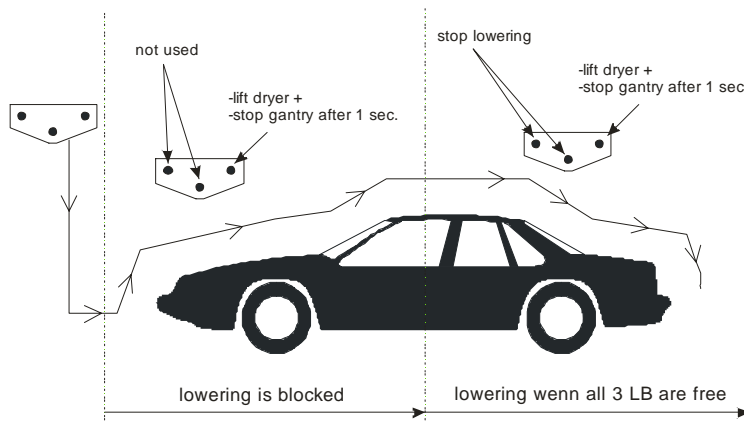
The dryer is equipped with 3 pairs of photo eyes, which are used to map the shape of vehicles in various wash steps, which are a.) hp cycles and b.) drying cycles.

This mapping will allow to follow the horizontal surface of standard vehicles in a defined distance.

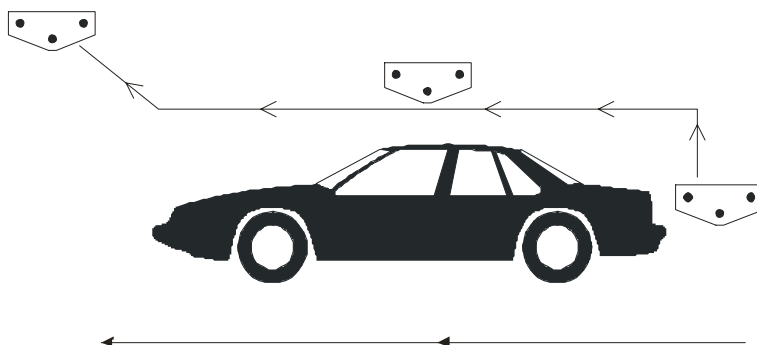
In every first contour cycle the distance between dryer and surface of vehicle is defined by the position of the various photo eyes. All information's of the first pass are stored and any following contour pass is done with the use of the stored memory. The photo eyes in this case are only active for safety reasons.

Contour

First Contour Forward



Dryer Contour Backward



In the first contour step the shape of the car is memorized with the use of the Foto eyes. At all following contour steps in this wash the PLC uses the memory plus a distance. The Foto eyes are still active for safety functions.

2.) additional information's

The distance between each pair of photo eyes, has been evaluated in intensive tests, researching the different shapes of standard vehicles. The result has been proven in more than 10 years of experience with operating units worldwide.

It has been taken into consideration, that there can be exceptional conditions, like

- a. small items like antennas that cannot be detected via the photo eyes
- b. failures of the sensor system (counters, proximity switches, photo eyes)
- c.) add on items (spare tires in different sizes, mounted in various distances from the vehicles body)

Therefore additional highly sensitive touch pads will cover for undetected items and protect the area between the photo eyes.

The position (angle) of the 2 touch pads is set to protect 3 directions: front, rear, middle. All development has been done to the best knowledge and experience, considering standard vehicles.

In case of further exceptions and non standard vehicles we refer to the owners manual that these vehicles cannot be washed, or will require manual intervention with the use of the designated buttons (dryer lift, roof brush lift, side brush retract).

3.) description of examination

On a standard CWP dryer we have performed the following testing sequence:

Test 1

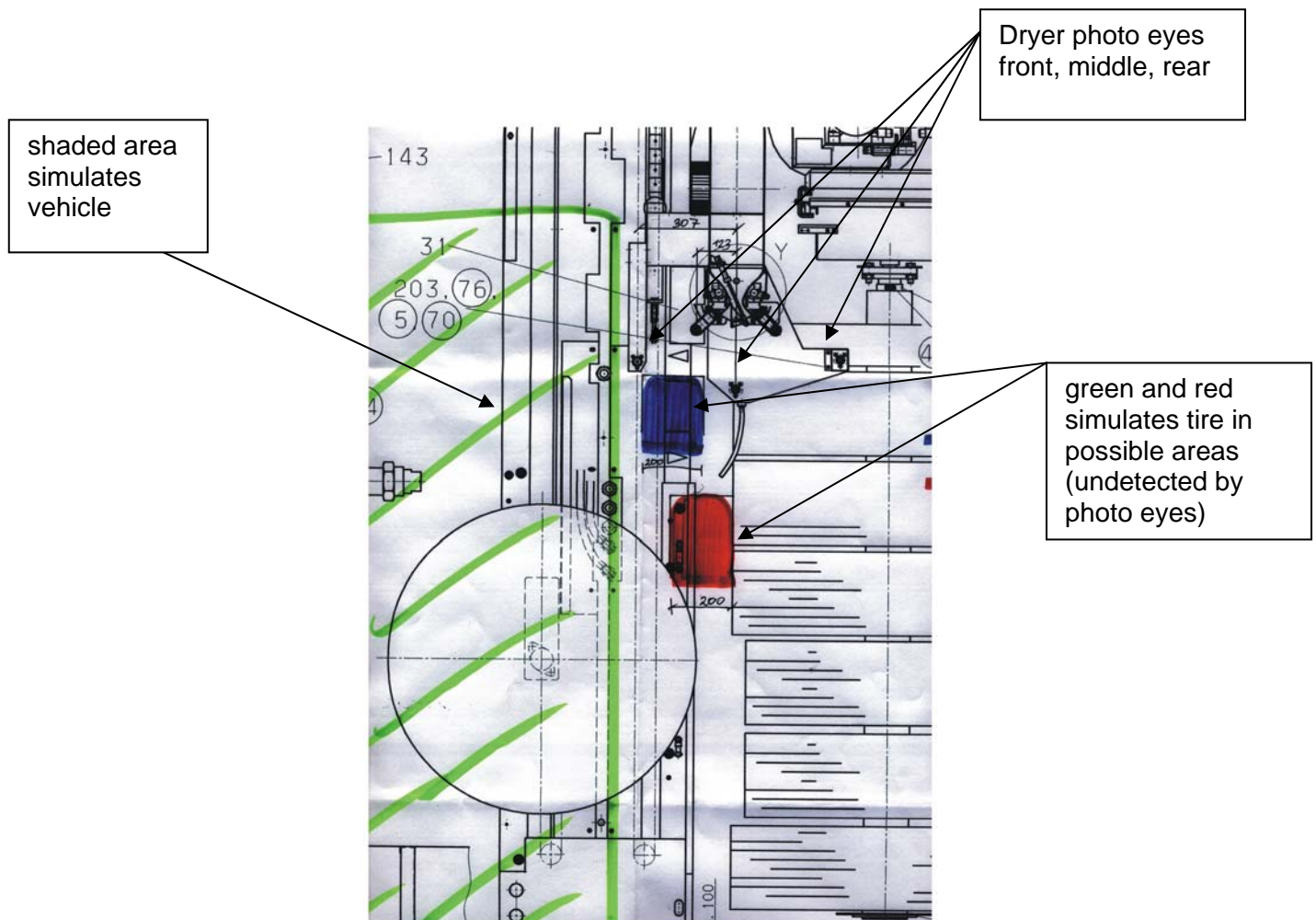
Lowering the dryer unit to a even surface with the corresponding speed used in any wash program.

Test 2

Lowering the dryer unit to a even surface with the corresponding speed used in any wash program, tilting the surface in 1degree steps from 0 degree up to 10 degrees in both directions.

Test 3

Lowering the dryer unit with the corresponding speed used in any wash program onto a spare tire with smaller dimension than the distance of the photo eyes rear and middle and front and middle. Additionally repositioning the tire forward and backwards within the uncovered space between the photo eyes in 10mm steps.



4.) Result

Under every condition of all performed tests, the sensitivity of the touch pads stopped the lowering movement and raised the dryer.

In all situations, there was no contact of the dryer housing and the object that triggered the switch.

Additional research in the program identified that there is no gantry movement possible whenever touch pad signal is dropping low.

5.) Presumption

since it is undisputed that a malfunction has occurred, there are further considerations of causes necessary.

Possible conditions of failure:

a.) too much play between rubber switch and attachment bracket, will allow the whole rubber unit to bent, lowering movement is stopped at a further distance, contact of dryer is possible.

b.) switch has a lack of sensitivity (switch is operating on resistive measure), that will lead into the same result as described in a.)

<p>Posted: 05/24/2005 10:40 AM PDT Posted by: mr-gte [member] Joined: 11/09/02 Last Post: 11/28/06</p>	<p>I have had damage to three touch-lips and they are all starting to distort How much are you paying for them?I have heard they are \$1500.00 Where is the cheapest place to get them? I have holes poked through them.I put silicone in the holes to stop water from getting in.</p> <hr/> <p>mr-gte</p>
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6.) Further investigations

After testing described conditions we have ensured that the safety system attached to the dryer is fully functional.

Considering that over time some additional play is possibly adding between the rubber switch and it's attachment, chances are raising that there is no immediate activation of the switches when multiple conditions meet a.) mechanical play within the switch + b.) spare tire dimension will allow to fit between the photo eyes + c.) particular distance between vehicle body and spare tire.

7.) Suggested procedure

To ensure immediate activation even under inopportune conditions and to support your job profile, we will create a kit, that angles the rear pad approximately 5° further to the vertical direction. We will send you 3 sets, free of charge, to be mounted on your machines.

To cover for inconvenience, we additionally will send on our expense one set of the latest version touch switch, that is used in the CHH 8000 (Opti Wash). This switch additionally is covered with another sleeve, to resist better against the wear and tear of antennas.