

TECHNICAL NOTE 11-01
WATER RESTRAINT SYSTEM (WRS)
Video Monitor Screen – Explanation of System Status Information
Dated: August 26, 2001

Introduction

This information describes the information that can appear on the video overlay of the video monitor screen. This information provides system status of all major systems and is recorded on the videotape in case of an incident. The following information describes the meaning of the status indications.

Information

The WRS status is continually displayed on the video display monitor at all times when the system is energized. This information can be used by the operator, and by the service technician as a troubleshooting aid. This information is also recorded by the videocassette recorder for playing at a later date or during review of an incident.

The information on the video display appears as follows. This information is superimposed over the video aiming information and is recorded by the videocassette recorder.

Hydro-Force WRS >XXXXXXXXXXXXXXXXXXXX				
	Pressure	Level	Jet	Impact
Water	“W-A”	“W-B”	“W-C”	“W-D”
Additive	“A-A”	“A-B”	“A-C”	
<i>Nozzle</i>				
<i>Additive</i>				
<i>Water</i>				
<i>Diesel</i>				
VIDEO DISPLAY SCREEN				
“date” “alarm#” “time”				

The Hydro-Force WRS >XXXXXXXXXXXXXXXXXXXX is the heading that appears at the top of the display screen. The >XXXXXXXXXXXXXXXXXXXX is the institution name that is programmed into the system at installation.

The “date” and “time” should be the correct date and time. If they are not correct notify maintenance immediately.

Each “cell” of the status display can provide the following information:

Cell	Display	Explanation
W-A	OFF	Water stream is off, pressure is 0
	NORMAL	Water stream pressure is normal
	LOW	Water stream pressure is low, call maint.
	PSFAULT	There is a pressure sw. problem, call maintenance
W-B	EMPTY	Water tank is empty, call maintenance
	1	Water tank is ¼ full
	2	Water tank is ½ full
	3	Water tank is ¾ full
	FULL	Water tank is full (normal condition)
W-C	SHORT	Short pulse is selected on control panel
	LONG	Long pulse is selected on control panel
	CONTINUOUS	Continuous stream is selected (No chemical is present in this mode)
W-D	HIGH	High-pressure water stream is selected
	LOW	Low pressure water stream is selected (Lower pressure for short distance delivery)
A-A	OFF	Chemical tank pressure is 0, call maint.
	NORMAL	Chemical tank pressure is normal
	LOW	Chemical tank pressure is low, call maint.
A-B	EMPTY	Chemical tank is empty, call maintenance
	1	Chemical tank is ¼ full, call maintenance
	2	Chemical tank is ½ full (normal)
	3	Chemical tank is ¾ full (normal)
	FULL	Chemical tank is full (normal)
A-C	OFF	Chemical injection switch is off (chemical will not be injected)
	ON	Chemical injection switch is on (chemical WILL be injected)

The video display wording shown in *italics* will only appear when a system fault occurs. The wording will flash indicating a problem condition. If you see a flashing indication, call maintenance immediately. The following is the explanation the displays:

Line	Display	Explanation
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Nozzle	NVPR LOW	Nozzle valve pressure low
Additive	AVPR LOW	Chemical valve pressure low
Water	WPPR LOW	Nozzle line water pressure low
Diesel*	ENGINE COOLANT	Motor coolant level low
	ENGINE TEMPER	Motor coolant temp. too high
	ENGINE OIL	Motor oil level low
	ENGINE SHUTDOWN	Automatic shutdown of diesel engine (Problem found in engine)

* These indications only will appear with the diesel-powered system. The diesel motor system includes an automatic monitoring system. If a problem is discovered and lasts for more than seven seconds, an alarm will appear. If the problem lasts more than 30 seconds, the diesel motor will be automatically shut down. If this occurs, call maintenance immediately.

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