HOSE REEL - VSC9000 FIRMWARE TRACKING SHEET

Firmware Revision	Status	Change Description	Reason for Change	Validation Testing Date	Released Date
v112923a	FIELD TRIAL	1. Added primary proximity sensor filtering feature which ignores sensor pulses with durations of less than 3 milliseconds. 2. Demotes the "33 millisecond gap" proximity sensor filter from v101723 to the secondary filter. 3. Removed "Item 2 >3.5 mph prox filter" which was added in v101723 4. Removed "item 3 weighted average speed calculation" code which was added in v101723	Improved rejection of a broad spectrum of errant inputs. Eliminate errors in speed calculations caused by weighted average of Reel-Out speed. Attempting to mitigate the tendency to improperly apply braking during REEL-OUT due to occasional incorrect speed calculations with an alternate method	12/4/2023	(12/18/23)
v112923	ALTERNATE	Same description as v112923a, with items 3 and 4 retained instead of removed.	Improved rejection of a broad spectrum of errant inputs. Unsolicited version retaining previous filters. Attempting to mitigate the tendency to improperly apply braking during REEL-OUT due to occasional incorrect speed calculations	12/1/2023	-
v102023	CURRENT RELEASE	Eliminates a Powered Reel-Out bug which caused the reel to continue to REEL-OUT after Final Wrap Braking had been activated	Minor nuisance issue.	10/25/2023	10/27/2023
v101723	OBSOLETE	1. Added primary proximity sensor filtering feature which ignores sensor pulses which occur within 33 milliseconds of the previous pulse. This pulse rate coincides with the practical maximum REEL-IN speed of 13.7 mph on the top wrap and 8.2 mph. 2. Changed speed calculation during REEL-IN to ignore the results of calculations which are greater than 3.5 mph faster than the most previous result. 3. Changed speed calculation during REEL-OUT to be a running weighted average which consists of 80% of older values and 20% of new values	Attempting to mitigate the tendency to improperly apply braking during REEL-OUT due to occasional incorrect speed calculations	Abandoned 10/20/23	-
v100323	OBSOLETE	Commented out two lines of code which check for "Transmit Complete" flag on debug messages.	Correcting a bug which allowed the reel to get stuck in REEL-IN state. Shipped to AmeriGas (10/9/23)	10/5/2023	10/13/2023
v091323	OBSOLETE	Added code to release the brake 1 second after Last Wrap Braking activation during REEL-OUT.	Allows for further manual removal of hose after the Last Wrap Brake feature had been activated, if it was necessary for the user to do so	10/4/2023	Limited Release 9/18/23
v030223	OBSOLETE	1. Added Open Loop Powered REEL-OUT option 2. Added feature which activates the motor brake during the last revolution during REEL-OUT 3. Added Low Voltage Fault indicator.	1. Addition of customer requested Powered REEL-OUT option 2. Last rev braking is intended to prevent over-rotation during REEL-OUT 3. The new fault indicator assists with troubleshooting of electrical problems.	3/20/2023	9/21/2023
v052722	OBSOLETE	Changed the threshold for REEL-IN automatic slowdown to 12 prox counts (1 1/2 revolutions) from the original starting fully reeled-in position.	Further fine-tuning of Final Wrap Slowdown feature	5/27/2022	6/2/2022
v052522	OBSOLETE	Changed the threshold for REEL-IN automatic slowdown to 8 prox counts (1 revolution) from the original starting fully reeled-in position.	Fine-tuning of Final Wrap Slowdown feature	5/23/2022	-
v051122	OBSOLETE	Added feature which slows REEL-IN from chosen speed setting to minimum (1.5 mph) when the user is nearly done retracting the hose. The reel slows during the last 12 proximity counts (1 1/2 revolutions) from the Home Position. The Home Position is reset when the system is power cycled.	Attempting to improve user experience during REEL-IN	5/16/2022	-
v020722	OBSOLETE	Changed software Over-Current time limit 2 seconds to 15 seconds	Restore the Pull Force to be equivalent with Field Trial units	2/15/2022	2/15/2022
v112221	OBSOLETE	Added PC3 speed control functionality	To assure that all production VSC9000's are PC3 speed control capable.	12/17/2021	-
v081821	OBSOLETE	Initial internal release	Barebones prototype firmware for internal evaluation testing	Magnum sent on (8/17/21)	-

SHEET NOTES:
1. WHEN ADDING NEW FIRMWARE INSERT NEW ROW TO TOP
(JUST LIKE A REVISION TABLE ON A DRAWING)
2. COLOR CONTROLLED BY FORMULA IN COLUMN - TYPE STATUS DESCRIPTION BELOW
CURRENT RELEASE - GREEN
FIELD TRIAL - BLUE
ALTERNATE - YELLOW
OBSOLETE - RED