

REVISIONS						
REV.	ECO	DESCRIPTION	VERSION	APPROVAL	DATE	
A	30039	INITIAL RELEASE	2.0.0.76	MKR	09/20/17	
B	31133	REVISED PER ECO	2.1.0.92	GDM	03/12/18	
C	31550	REVISED PER ECO	2.1.1.7	GDM	05/31/18	
D	32115	REVISED PER ECO	2.2.0.49	G MARTINS	09/25/18	

RELEASE NOTES:

VERSION:	2.2.0.49	FILE NAME: MDU_P502_Standard_v2_2_0_49.hex
		SIZE: 516,416 BYTES

VERSION 2.2.0.49:
1. Initial Clang Format
2. Removed Deadband check from SetActuatorOwnerAndOutputValue due to it not being used.
3. Added current comp support for High Current Eaton Valve used on newer magnums
4. Added support for calculating the control threshold based on the difference between the min and the max.
5. Removed active/inactive current check for analog valves
6. Function/Variable name refactoring
7. Moved limit checks for the response rate into the SetSteeringCtrlRampRate function call.
8. Added ability to increase decrease steering response rate from SPN
9. Removal of unneeded calls/variables
10. Fixed timestamp initialization for LED's
11. Moved version time management functions
12. Send current "Current Compensation" gains over CAN for testing/validation purposes
13. Update "Current Compensation" gains for the SBG valve
14. Added support for easier comparisons to 2.3
15. DTC clean up to allow the DTC list to be more useful in the calibration wizard
16. Steering status code support.
17. Start of work to support standalone vt integration for 2.3
18. Support for production calibration on MDU
19. Initial code for supporting implement steer angle sensor break out.
20. Added the capability to filter the angle sensor based on a machine database setting.
21. Improved the Center Point Correction algorithm to fix issues found when steering on pivots.
22. Added angle sensor percentage getter to support implement steer.
23. Support for being able manually to register more partners
24. Only allow manual registration at startup if calibration is complete
25. Support for sending correct values on the GMS message for implement steer
26. Support for registering OEM specific SC1
27. Moved Function calls in Machinetunesets.c to a "User" file to prevent the file from getting so large
28. Added check for operator presence integrity
29. Added support for new generic tunesets
30. Fixed bug in ConvertSoftwareStringToNumericValue

NOTES:	<div>RAVEN</div> <div>RAVEN INDUSTRIES, INC.</div> <div> SIOUX FALLS, SD 57104</div>			TITLE:		
				SOFTWARE SPECIFICATIONS, RS1		
				MDU ASSEMBLY		
				SIZE	DRAWING NUMBER	REV
	DRAWN	RRS	09/21/17	A	077-0171-502	D
	APPROVED	MKR	09/21/17			
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				14979	N/A	1 OF 5

RELEASE NOTES:

VERSION:	2.2.0.49	FILE NAME:	MDU_P502_Standard_v2_2_0_49.hex
		SIZE:	516,416 BYTES

- 31. Support for storing preferred can addresses
- 32. Support for checking encoder integrity on dual encoder systems
- 33. Moved vt support files to the correct files
- 34. Support for reading in the correct off-vehicle gateway isoname
- 35. Added checks to make sure we don't index out of bounds on the port we are trying to send from.
- 36. Added support for CASE HDU assembly
- 37. Added support for reading operator presence in over CAN 2 and other MMI controller items
- 38. Removed WAS convergence check
- 39. Disabled engage/disengage beep from HDU/MDU
- 40. Added support for Versatile and Magnum MMI controllers
- 41. Added WAS alignment fault check.
- 42. Added Front Steer Tractor for HDU into LoadWheelAngleBlendingRatioTable
- 43. Added "Get" calls for actual curvature, minimum turn radius and actual filtered curvature
- 44. Added InitializeMedianFilter function
- 45. Removed duplicate check from CalculateMatrixDeterminant
- 46. Build automation support
- 47. Moved auto-clear timer out of DebounceSwitchStateStruct function call.
- 48. Added support for multiple service tools
- 49. Added check for null partner with ETP partner
- 50. Support for notifying Raven navigation controller of supported software version.

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RELEASE NOTES:

VERSION:	2.1.1.7	FILE NAME:	RS1MDU_P502_v2_1_1_7.hex
		SIZE:	500,603 BYTES

VERSION 2.1.1.7

1. Changes for Production fixture

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RELEASE NOTES:

VERSION:	2.1.0.92	FILE NAME:	RS1MDU_P502_v2_1_0_92.hex
		SIZE:	500,483 BYTES

VERSION 2.1.0.92

1. Changed software version to 2.1.0.92
2. Added support for HDU hardware configuration (I/O, SPI, timers, etc).
3. Change Project Structure to support HDU and MDU builds from the same core files
4. Eliminated use of OS_R_TMO and changed them over to timed event flags through system timer (better timing and no OS fails with A2D converter)
5. Added support for all of the additional measurements on the HDU including:
 - a. Dual wheel angle with four configuration types
 - b. Dual disengage with four configuration types
 - c. Operator Presence
 - d. Jumper Configuration
6. Added current comp control for PWM valves and actuation support for analog valves.
7. Added support for handling swapped hydraulics. This also swaps the ground measurements with a PWM valve.
8. Major overall to how profiles work
9. Added 3 and 4 wheel floater classes
10. Error handling is now handle by the MDU during health test operation. Added additional errors in the process of moving this over from RS1.
11. Various bug fixes for Auto calibration errors
12. The tuneset selected by the operator is now loaded over memory access read request from the MDU.
13. Added communication and reprogramming support for safety micro
14. Added version total minutes
15. Added support for disengage calibration for transducers.
16. Added ability to register mmi partner manually (not used currently)
17. Added initial support for IDU (not validated yet). In the process of doing so we broke the wheel angle sensor routine into three .c files. One generically shared for implement angle and wheel angle. One for a wheel angle measurement and one for an implement angle measurement.
18. Added Safety Features for:
 - a. Curvature Safety limit
 - b. SID integrity monitoring
 - c. WAS not responding DTC
19. Raven Distributed Software Filtering Criteria
 - a. ECU Assembly P/N - 0634001010,0634001038
 - b. ECU Version - None
 - c. Serial Number - None
 - d. ID Number - None
 - e. Product Family - None
 - f. Function Code - None
 - g. Function Instance - None
 - h. Mfg. Number - None
 - i. Vehicle System - None
 - j. Vehicle System Instance - None

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CODE		SCALE	SHEET
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RELEASE NOTES:

VERSION:	2.0.0.76	FILE NAME:	RS1MDU_P502_v2_0_0_76.hex
		SIZE:	401,096 BYTES

VERSION 2.0.0.76

1. Initial Release

2. Raven Distributed Software Filtering Criteria

a. ECU Assembly P/N - 0634001010,0630173887,0634001038

b. ECU Version - None

c. Serial Number - None

d. ID Number - None

e. Product Family - None

f. Function Code - None

g. Function Instance - None

h. Mfg. Number - None

i. Vehicle System - None

j. Vehicle System Instance - None

k. ECU Instance - None

l. Industry Group - None

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CODE		SCALE	SHEET
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