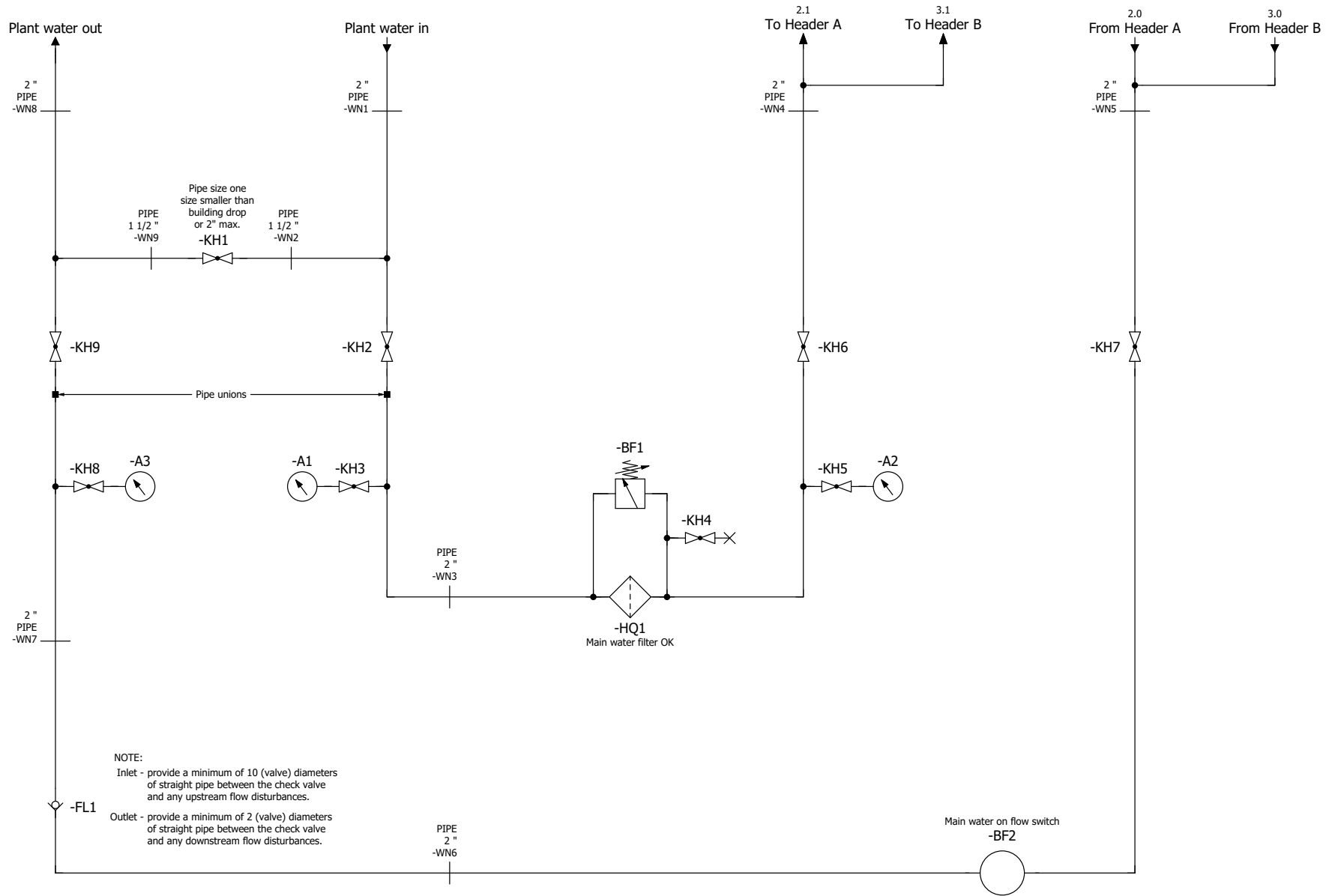


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F06_001

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&MAA/1	Title page / cover sheet		10/4/2022	KMAFFRE	
&MAB/1	Table of contents		10/4/2022	KMAFFRE	
&MFS=KH3+KH3/1	Incoming water supply		10/4/2022	KMAFFRE	
&MFS=KH3+KH3/2	Water distribution		10/4/2022	KMAFFRE	
&MFS=KH3+KH3/3	Water distribution		10/4/2022	KMAFFRE	
&MPB+KH3/1	Material specification		10/4/2022	KMAFFRE	
&MPB+KH3/1.a	Material specification		10/4/2022	KMAFFRE	
&MMC/1	Cable overview : =KH3+KH3-WN1 - =KH3+KH3-WN36		10/4/2022	KMAFFRE	



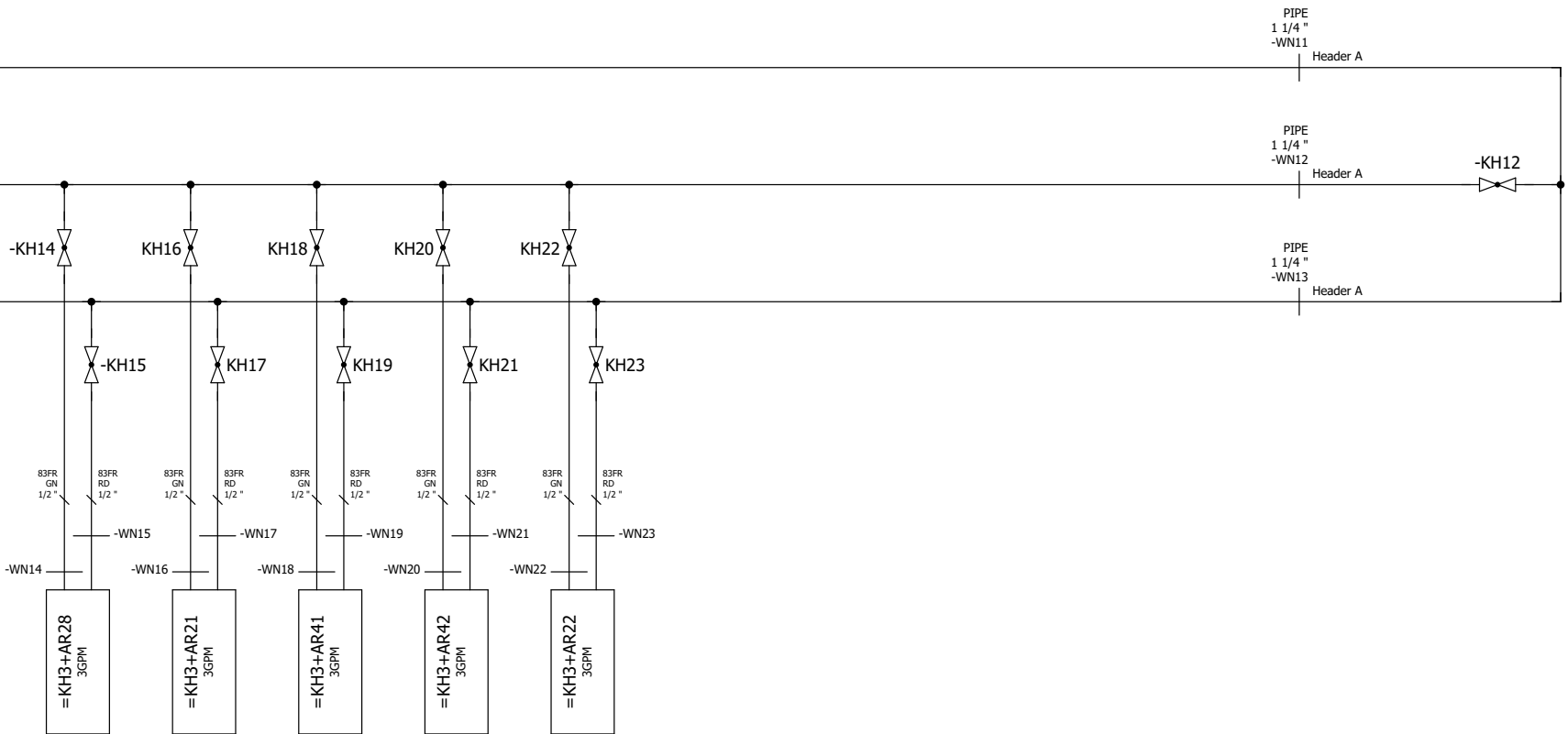
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Date	10/4/2022	Volvo Trucks North America	Valiant TMS	Incoming water supply	Drawing name:	= 2V02&MFS-WATER	= KH3
Ed.	KMAFFRE				Document type:	MFS	+ KH3
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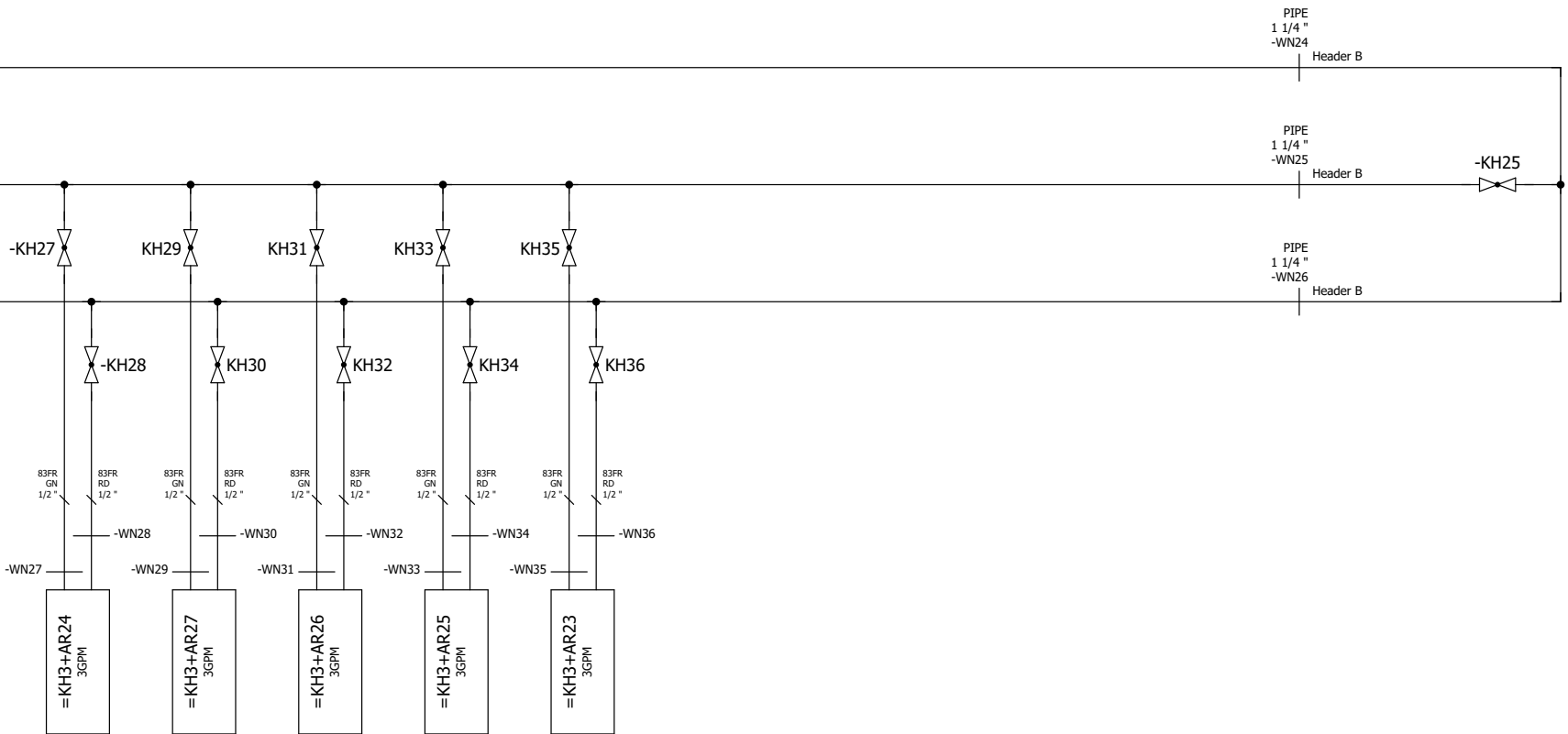
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			Date	10/4/2022	Volvo Trucks North America		Valiant TMS	Water distribution	Drawing name:		= KH3
			Ed.	KMAFFRE					= 2V02&MFS-WATER		+ KH3
			Appr		P6700 Underbody Structure - Robot Cell 2V02		Scale 1:1		Document type:	Project nr:	Page
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&MPB/1

		Date	10/4/2022	Volvo Trucks North America		Valiant TMS	Water distribution	Drawing name:		= KH3
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Parts list

F01_001

Device tag	Quantity	Designation	Type number	Supplier	Part number
=KH3-A1	1	1/4" Pressure gauge, 0~100PSI 2-1/2" dial w/ABS case	25.110.100	NOSHOK	25.110.100
=KH3-A2	1	1/4" Pressure gauge, 0~100PSI 2-1/2" dial w/ABS case	25.110.100	NOSHOK	25.110.100
=KH3-A3	1	1/4" Pressure gauge, 0~100PSI 2-1/2" dial w/ABS case	25.110.100	NOSHOK	25.110.100
=KH3-BF1	1	Water differential pressure switch w/gage, 1/4 pt	DP-F-KIT	OMNI CONTROLS	DP-F-KIT
=KH3-BF2	1	Water flow switch, 1/2" NPT, PNP N.O., M12, Immersion Sensor	FCS-N1/2A4-AP8X-H1141	TURCK	TUR.FCS-N1/2A4-AP8X-H1141
=KH3-FL1	1	2" CHECK VALVE, IN LINE	61-108-01	CONBRACO	61-108-01
=KH3-HQ1	1	2" Water bag filter; NPT size 2, 200 GPM max flow	20403-001-2"	OMNI CONTROLS	20403-001-2"
=KH3-KH1	1	1-1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-107-46	APOLLO	77-107-46
=KH3-KH1	1	1-1/2" ~ 2" BALL VALVE HANDLE COVER, GREEN	W-8374-GREEN	CONBRACO	W-8374-GREEN
=KH3-KH2	1	2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-108-46	APOLLO	77-108-46
=KH3-KH2	1	1-1/2" ~ 2" BALL VALVE HANDLE COVER, GREEN	W-8374-GREEN	CONBRACO	W-8374-GREEN
=KH3-KH3	1	1/4" BALL VALVE, 2PC FULL PORT BRONZE - NPT	77-101-01	APOLLO	77-101-01
=KH3-KH3	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH4	1	1/4" BALL VALVE, 2PC FULL PORT BRONZE - NPT	77-101-01	APOLLO	77-101-01
=KH3-KH4	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH5	1	1/4" BALL VALVE, 2PC FULL PORT BRONZE - NPT	77-101-01	APOLLO	77-101-01
=KH3-KH5	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH6	1	2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-108-46	APOLLO	77-108-46
=KH3-KH6	1	1-1/2" ~ 2" BALL VALVE HANDLE COVER, GREEN	W-8374-GREEN	CONBRACO	W-8374-GREEN
=KH3-KH7	1	2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-108-46	APOLLO	77-108-46
=KH3-KH7	1	1-1/2" ~ 2" BALL VALVE HANDLE COVER, GREEN	W-8374-GREEN	CONBRACO	W-8374-GREEN
=KH3-KH8	1	1/4" BALL VALVE, 2PC FULL PORT BRONZE - NPT	77-101-01	APOLLO	77-101-01
=KH3-KH8	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH9	1	2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-108-46	APOLLO	77-108-46
=KH3-KH9	1	1-1/2" ~ 2" BALL VALVE HANDLE COVER, GREEN	W-8374-GREEN	CONBRACO	W-8374-GREEN
=KH3-KH11	1	1-1/4" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-106-46	APOLLO	77-106-46
=KH3-KH11	1	1" ~ 1-1/4" BALL VALVE HANDLE COVER, GREEN	W-8372-GREEN	CONBRACO	W-8372-GREEN
=KH3-KH12	1	1-1/4" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-106-46	APOLLO	77-106-46
=KH3-KH12	1	1" ~ 1-1/4" BALL VALVE HANDLE COVER, GREEN	W-8372-GREEN	CONBRACO	W-8372-GREEN
=KH3-KH14	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH14	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH15	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH15	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH16	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH16	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH17	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH17	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH18	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH18	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH19	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH19	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH20	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH20	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH21	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH21	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH22	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH22	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH23	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH23	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH24	1	1-1/4" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-106-46	APOLLO	77-106-46
=KH3-KH24	1	1" ~ 1-1/4" BALL VALVE HANDLE COVER, GREEN	W-8372-GREEN	CONBRACO	W-8372-GREEN
=KH3-KH25	1	1-1/4" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-106-46	APOLLO	77-106-46
=KH3-KH25	1	1" ~ 1-1/4" BALL VALVE HANDLE COVER, GREEN	W-8372-GREEN	CONBRACO	W-8372-GREEN
=KH3-KH27	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH27	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH28	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46

&MFS=KH3/3

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		Date	10/4/2022	Volvo Trucks North America		 Valiant TMS	Material specification		Drawing name:		=
		Ed.	KMAFFRE								+ KH3
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Parts list

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Device tag	Quantity	Designation	Type number	Supplier	Part number
=KH3-KH28	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH29	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH29	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH30	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH30	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH31	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH31	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH32	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH32	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH33	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH33	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH34	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH34	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH35	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH35	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN
=KH3-KH36	1	1/2" BALL VALVE, 2PC FULL PORT BRONZE W/LOCK - NPT	77-103-46	APOLLO	77-103-46
=KH3-KH36	1	1/4"~1/2" BALL VALVE HANDLE COVER, GREEN	W-8368-GREEN	CONBRACO	W-8368-GREEN

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Cable overview

F10_007 WATER

Cable name	Source (from)	Target (to)	cable type	all conductors	Conductors used	Cross-section ["]	Length [m]	function text	Graphical page of cable diagram
=KH3-WN1			PIPE		0	2			
=KH3-WN2	=KH3+KH3-KH1	=KH3+KH3-KH2	PIPE		0	1 1/2			
=KH3-WN3	=KH3+KH3-HQ1	=KH3+KH3-KH3	PIPE		0	2			
=KH3-WN4	=KH3+KH3-KH15	=KH3+KH3-KH6	PIPE		0	2			
=KH3-WN5	=KH3+KH3-KH11	=KH3+KH3-KH7	PIPE		0	2			
=KH3-WN6	=KH3+KH3-BF2	=KH3+KH3-FL1	PIPE		0	2			
=KH3-WN7	=KH3+KH3-FL1	=KH3+KH3-KH8	PIPE		0	2			
=KH3-WN8	=KH3+KH3-KH9	=KH3+KH3-OUT	PIPE		0	2			
=KH3-WN9	=KH3+KH3-KH1	=KH3+KH3-KH9	PIPE		0	1 1/2			
=KH3-WN11	=KH3+KH3-KH11	=KH3+KH3-KH12	PIPE		0	1 1/4			
=KH3-WN12	=KH3+KH3-KH12	=KH3+KH3-KH23	PIPE		0	1 1/4			
=KH3-WN13	=KH3+KH3-KH12	=KH3+KH3-KH24	PIPE		0	1 1/4			
=KH3-WN14	=KH3+AR28-WATER	=KH3+KH3-KH14	83FR		0	1/2			
=KH3-WN15	=KH3+AR28-WATER	=KH3+KH3-KH15	83FR		0	1/2			
=KH3-WN16	=KH3+KH3-KH16	=KH3+AR21-WATER	83FR		0	1/2			
=KH3-WN17	=KH3+KH3-KH17	=KH3+AR21-WATER	83FR		0	1/2			
=KH3-WN18	=KH3+KH3-KH18	=KH3+AR41-WATER	83FR		0	1/2			
=KH3-WN19	=KH3+KH3-KH19	=KH3+AR41-WATER	83FR		0	1/2			
=KH3-WN20	=KH3+AR42-WATER	=KH3+KH3-KH20	83FR		0	1/2			
=KH3-WN21	=KH3+AR42-WATER	=KH3+KH3-KH21	83FR		0	1/2			
=KH3-WN22	=KH3+KH3-KH22	=KH3+AR22-WATER	83FR		0	1/2			
=KH3-WN23	=KH3+KH3-KH23	=KH3+AR22-WATER	83FR		0	1/2			
=KH3-WN24	=KH3+KH3-KH11	=KH3+KH3-KH12	PIPE		0	1 1/4			
=KH3-WN25	=KH3+KH3-KH23	=KH3+KH3-KH25	PIPE		0	1 1/4			
=KH3-WN26	=KH3+KH3-KH12	=KH3+KH3-KH24	PIPE		0	1 1/4			
=KH3-WN27	=KH3+AR24-WATER	=KH3+KH3-KH27	83FR		0	1/2			
=KH3-WN28	=KH3+AR24-WATER	=KH3+KH3-KH28	83FR		0	1/2			
=KH3-WN29	=KH3+AR27-WATER	=KH3+KH3-KH29	83FR		0	1/2			
=KH3-WN30	=KH3+AR27-WATER	=KH3+KH3-KH30	83FR		0	1/2			
=KH3-WN31	=KH3+AR26-WATER	=KH3+KH3-KH31	83FR		0	1/2			
=KH3-WN32	=KH3+AR26-WATER	=KH3+KH3-KH32	83FR		0	1/2			
=KH3-WN33	=KH3+AR25-WATER	=KH3+KH3-KH33	83FR		0	1/2			
=KH3-WN34	=KH3+AR25-WATER	=KH3+KH3-KH34	83FR		0	1/2			
=KH3-WN35	=KH3+AR23-WATER	=KH3+KH3-KH35	83FR		0	1/2			
=KH3-WN36	=KH3+AR23-WATER	=KH3+KH3-KH36	83FR		0	1/2			

&MPB+KH3/1.a

			Date 10/4/2022	Volvo Trucks North America	Valiant TMS	Cable overview : =KH3+KH3-WN1 - =KH3+KH3-WN36	Drawing name:			Page 1
			Ed. KMAFFRE							
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			Original	Replacement of	Replaced by					