3980 North Fraser Way
Burnaby, BC, V5J 5K5
(604) 527-8378 ph. | (604) 527-8368 fx.
www.qai.org

EVALUATION REPORT

APPLICANT FILE NUMBER: REC563
REPORT NUMBER: REC563-1-1, EDITION 53

APPLICANT: Newmar Corporation
355 North Delaware Street,
Nappanee, Indiana,
USA, 46550

Attention: Rodney Newcomer, Codes and Compliance Manager

EDITION 53: May 25, 2022; Application Number REC563-1-1 – Burnaby Office
Issued by Jennifer Willis, Project Manager; Reviewed by Jacky Chen, Project Manager

Contents:		
	Evaluation Report:	Pages 1 through 43, dated May 25, 2022
	Material List:	Pages 1 through 30, dated May 25, 2022
	Figures:	Figures 1 through 67, dated March 6, 2009
		Figures 68 through 79, dated January 19, 2010
		Figures 80 through 115, dated March 1, 2010
		Figures 116 through 151, dated March 8, 2010
		Figures 152 through 179, dated November 1, 2012
		Figures 180 through 305, dated April 5, 2013
		Figures 306 through 347, dated May 1, 2013
		Figures 348 through 375, dated June 4, 2013
		Figures 432 through 445, dated September 13, 2013
		Figures 446 through 529, dated March 3, 2014
		Figures 530 through 634, dated April 16, 2014
		Figures 635 through 666, dated July 14, 2014
		Figures 667 through 693, dated August 20, 2014
		Figures 694 through 724, dated September 18, 2014
		Figures 725 through 731, dated November 6, 2014
		Figures 732 through 754, dated January 28, 2015
		Figures 755 through 775, dated February 6, 2015
		Figures 776 through 812, dated February 25, 2015
		Figures 813 through 837, dated March 13, 2015
		Figures 952 through 997, dated March 29, 2016
		Figures 998 through 1050, dated May 3, 2016
		Figures 1051 through 1082, dated June 30, 2016
		Figures 1083 through 1106, dated August 26, 2016
		Figures 1107 through 1159, dated December 20, 2016
		Figures 1160 through 1191, dated January 19, 2017
		Figures 1192 through 1239, dated March 3, 2017
		Figures 1240 through 1296, dated March 27, 2017
		Figures 1297 through 1328, dated July 11, 2017

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

		Figures 1329 through 1360, dated August 14, 2017
		Figures 1361 through 1392, dated December 4, 2017
		Figures 1393 through 1430, dated January 4, 2018
		Figures 1431 through 1468, dated February 26, 2018
		Figures 1469 through 1544, dated April 18, 2018
		Figures 1545 through 1583, dated May 31, 2018
		Figures 1584 through 1599, dated July 26, 2018
		Figures 1600 through 1625, dated February 22, 2019
		Figures 1626 through 1649, dated June 11, 2019
		Figures 1650 through 1679, dated August 23, 2019
		Figures 1680 through 1695, dated December 19, 2019
		Figures 1696 through 1723, dated February 24, 2020
		Figures 1724 through 1745, dated June 11, 2020
		Figures 1746 through 1817, dated October 20, 2020
		Figures 1818 through 1829, dated December 23, 2020
		Figures 1830 through 1853, dated February 25, 2021
		Figures 1854 through 1873, dated May 26, 2021
		Figures 1874 through 2009, dated May 25, 2022
Revised:	Evaluation Report:	Pages 1 through 43
	Material List	Pages B1 through B30
Added:	Figures:	Figures 1874 through 2009

Edition 53 supersedes and replaces Edition 52. Report reissued as Edition 53 with 18 added models. Refer to the table on pages 5-11 of this report for model names.

EDITION 52: May 26, 20211; Application Number REC563-1-1 – Burnaby Office
Issued by Jennifer Willis, Project Manager; Reviewed by Jacky Chen, Project Manager

Contents:	Evaluation Report:	Pages 1 through 43, dated May 26, 2021
	Material List:	Pages 1 through 30, dated October 20, 2020
	Figures:	Figures 1 through 67, dated March 6, 2009
		Figures 68 through 79, dated January 19, 2010
		Figures 80 through 115, dated March 1, 2010
		Figures 116 through 151, dated March 8, 2010
		Figures 152 through 179, dated November 1, 2012
		Figures 180 through 305, dated April 5, 2013
		Figures 306 through 347, dated May 1, 2013
		Figures 348 through 375, dated June 4, 2013
		Figures 432 through 445, dated September 13, 2013
		Figures 446 through 529, dated March 3, 2014
		Figures 530 through 634, dated April 16, 2014
		Figures 635 through 666, dated July 14, 2014
		Figures 667 through 693, dated August 20, 2014
		Figures 694 through 724, dated September 18, 2014
		Figures 725 through 731, dated November 6, 2014
		Figures 732 through 754, dated January 28, 2015
		Figures 755 through 775, dated February 6, 2015
		Figures 776 through 812, dated February 25, 2015
		Figures 813 through 837, dated March 13, 2015
		Figures 952 through 997, dated March 29, 2016

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

Figures 998 through 1050, dated May 3, 2016
Figures 1051 through 1082, dated June 30, 2016
Figures 1083 through 1106, dated August 26, 2016
Figures 1107 through 1159, dated December 20, 2016
Figures 1160 through 1191, dated January 19, 2017
Figures 1192 through 1239, dated March 3, 2017
Figures 1240 through 1296, dated March 27, 2017
Figures 1297 through 1328, dated July 11, 2017
Figures 1329 through 1360, dated August 14, 2017
Figures 1361 through 1392, dated December 4, 2017
Figures 1393 through 1430, dated January 4, 2018
Figures 1431 through 1468, dated February 26, 2018
Figures 1469 through 1544, dated April 18, 2018
Figures 1545 through 1583, dated May 31, 2018
Figures 1584 through 1599, dated July 26, 2018
Figures 1600 through 1625, dated February 22, 2019
Figures 1626 through 1649, dated June 11, 2019
Figures 1650 through 1679, dated August 23, 2019
Figures 1680 through 1695, dated December 19, 2019
Figures 1696 through 1723, dated February 24, 2020
Figures 1724 through 1745, dated June 11, 2020
Figures 1746 through 1817, dated October 20, 2020
Figures 1818 through 1829, dated December 23, 2020
Figures 1830 through 1853, dated February 25, 2021
Figures 1854 through 1873, dated May 26, 2021

Revised:	Evaluation Report:	Pages 1 through 43
Added:	Figures:	Figures 1854 through 1873

Edition 52 supersedes and replaces Edition 51. Report reissued as Edition 52 with 3 added models. Refer to the table on pages 5-11 of this report for model names.

Edition 1: March 6, 2009; Application Number REC563-1-1 – Port Moody Office
Issued by Kevin Nam, Project Manager; Reviewed by Ben Barker, Director of Engineering

Contents:	Evaluation Report:	Pages 1 through 30,
	Figures:	Figures 1 through 67

Refer to the following table for a complete list of report contents and revisions:

SUMMARY OF EDITIONS	
PROJECT NUMBER	**DATE OF ISSUE**
REC563-1-1, Edition 53	May 25, 2022
REC563-1-1, Edition 52	May 26, 2021
REC563-1-1, Edition 51	February 25, 2021
REC563-1-1, Edition 50	December 23, 2020
REC563-1-1, Edition 49	October 20, 2020
REC563-1-1, Edition 48	June 11, 2020
REC563-1-1, Edition 47	February 24, 2020

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

REC563-1-1, Edition 46	December 19, 2019
REC563-1-1, Edition 45	August 23, 2019
REC563-1-1, Edition 44	June 11, 2019
REC563-1-1, Edition 43	February 22, 2019
REC563-1-1, Edition 42	July 26, 2018
REC563-1-1, Edition 41	May 31, 2018
REC563-1-1, Edition 40	April 18, 2018
REC563-1-1, Edition 39	February 26, 2018
REC563-1-1, Edition 38	January 4, 2018
REC563-1-1, Edition 37	December 4, 2017
REC563-1-1, Edition 36	August 14, 2017
REC563-1-1, Edition 35	July 11, 2017
REC563-1-1, Edition 34	March 27, 2017
REC563-1-1, Edition 33	March 3, 2017
REC563-1-1, Edition 32	January 19, 2017
REC563-1-1, Edition 31	December 20, 2016
REC563-1-1, Edition 30	August 26, 2016
REC563-1-1, Edition 29	June 30, 2016
REC563-1-1, Edition 28	May 3, 2016
REC563-1-1, Edition 27	March 29, 2016
REC563-1-1, Edition 26	February 18, 2016
REC563-1-1, Edition 25	August 28, 2015
REC563-1-1, Edition 24	July 8, 2015
REC563-1-1, Edition 23	May 27, 2015
REC563-1-1, Edition 22	March 13, 2015
REC563-1-1, Edition 21	February 25, 2015
REC563-1-1, Edition 20	February 6, 2015
REC563-1-1, Edition 19	January 28, 2015
REC563-1-1, Edition 18	November 6, 2014
REC563-1-1, Edition 17	September 18, 2014
REC563-1-1, Edition 16	August 20, 2014
REC563-1-1, Edition 15	July 14, 2014
REC563-1-1, Edition 14	April 16, 2014
REC563-1-1, Edition 13	March 3, 2014
REC563-1-1, Edition 12	September 13, 2013
REC563-1-1, Edition 11	August 2, 2013
REC563-1-1, Edition 10	July 10, 2013
REC563-1-1, Edition 9	June 17, 2013
REC563-1-1, Edition 8	June 4, 2013
REC563-1-1, Edition 7	May 1, 2013
REC563-1-1, Edition 6	April 5, 2013
REC563-1-1, Edition 5	November 1, 2012
REC563-1-1, Edition 4	March 8, 2010
REC563-1-1, Edition 3	March 1, 2010
REC563-1-1, Edition 2	January 19, 2010
REC563-1-1, Edition 1	March 6, 2009

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

APPLICABLE REQUIREMENTS:

CSA Standard Z240 RV Series-14 - Recreational Vehicles

SUBJECT:

RECREATIONAL VEHICLES - Motorhomes & Tandem Axle Fifth Wheel Trailers

MANUFACTURING LOCATION(S):		PLANT SECTOR
1)	355 North Delaware Street, Nappanee, Indiana, USA, 46550	Engineering Department
2)	355 North Delaware Street, Nappanee, Indiana, USA, 46550	Production Line

LABELING LOCATION(S):		PLANT SECTOR
1)	355 North Delaware Street, Nappanee, Indiana, USA, 46550	Engineering Department
2)	355 North Delaware Street, Nappanee, Indiana, USA, 46550	Production Line

MODELS:

The following Class A Motor Home models are included in this report:

Product Lines: All Star, Bay Star, Canyon Star, Dutch Aire, Dutch Star, Essex, Grand Star, King Aire, Kountry Star, London Aire, Mountain Aire, New Aire, Ventana.
Prefixes describing the product line are added to the floor plan designation to indicate the model number.

TYPE	MODEL NAME	ELECTRICAL RATINGS	FUEL	DATE ADDED (MM/DD/YY)	FIGURES (PAGES)
Class A Motor Home	2702	120/240V, 60Hz, 30A/50A	Propane	03/06/09	-
Class A Motor Home	3430	120/240V, 60Hz, 30A/50A	Propane	03/06/09	-
Class A Motor Home	4016	120/240V, 60Hz, 30A/50A	Propane	03/06/09	-
Class A Motor Home	4043	120/240V, 60Hz, 30A/50A	Propane	03/06/09	-
Class A Motor Home	4159	120/240V, 60Hz, 30A/50A	Propane	03/06/09	-
Class A Motor Home	2902	120/240V, 60Hz, 30A/50A	Propane	02/09/10	-
Class A Motor Home	3855	120/240V, 60Hz, 30A/50A	Propane	02/09/10	-
Class A Motor Home	3302	120/240V, 60Hz, 30A/50A	Propane	03/01/10	-
Class A Motor Home	3405	120/240V, 60Hz, 30A/50A	Propane	03/01/10	-
Class A Motor Home	3411	120/240V, 60Hz, 30A/50A	Propane	03/01/10	-
Class A Motor Home	3642	120/240V, 60Hz, 30A/50A	Propane	03/01/10	-
Class A Motor Home	3810	120/240V, 60Hz, 30A/50A	Propane	03/01/10	-
Class A Motor Home	3856	120/240V, 60Hz, 30A/50A	Propane	03/01/10	-
Class A Motor Home	3734	120/240V, 60Hz, 30A/50A	Propane	03/08/10	-
Class A Motor Home	4020	120/240V, 60Hz, 30A/50A	Propane	03/08/10	-
Class A Motor Home	4034	120/240V, 60Hz, 30A/50A	Propane	03/08/10	-
Class A Motor Home	4324	120/240V, 60Hz, 30A/50A	Propane	03/08/10	-
Class A Motor Home	4336	120/240V, 60Hz, 30A/50A	Propane	03/08/10	-
Class A Motor Home	4353	120/240V, 60Hz, 30A/50A	Propane	03/08/10	-
Class A Motor Home	3610	120/240V, 60Hz, 30A/50A	Propane	11/01/12	-

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

TYPE	MODEL NAME	ELECTRICAL RATINGS	FUEL	DATE ADDED (MM/DD/YY)	FIGURES (PAGES)
Class A Motor Home	3634	120/240V, 60Hz, 30A/50A	Propane	11/01/12	-
Class A Motor Home	3953	120/240V, 60Hz, 30A/50A	Propane	11/01/12	-
Class A Motor Home	4018	120/240V, 60Hz, 30A/50A	Propane	11/01/12	-
Class A Motor Home	2903	120/240V, 60Hz, 30A/50A	Propane	04/05/13	180-186
Class A Motor Home	3124	120/240V, 60Hz, 30A/50A	Propane	04/05/13	187-193
Class A Motor Home	3215	120/240V, 60Hz, 30A/50A	Propane	04/05/13	194-200
Class A Motor Home	3220	120/240V, 60Hz, 30A/50A	Propane	04/05/13	201-207
Class A Motor Home	3850	120/240V, 60Hz, 30A/50A	Propane	04/05/13	208-214
Class A Motor Home	4037	120/240V, 60Hz, 30A/50A	Propane	04/05/13	215-221
Class A Motor Home	3436	120/240V, 60Hz, 30A/50A	Propane	04/05/13	222-228
Class A Motor Home	3921	120/240V, 60Hz, 30A/50A	Propane	04/05/13	229-235
Class A Motor Home	4360	120/240V, 60Hz, 30A/50A	Propane	04/05/13	236-242
Class A Motor Home	4369	120/240V, 60Hz, 30A/50A	Propane	04/05/13	243-249
Class A Motor Home	3308	120/240V, 60Hz, 30A/50A	Propane	04/05/13	250-256
Class A Motor Home	3956	120/240V, 60Hz, 30A/50A	Propane	04/05/13	257-263
Class A Motor Home	3433	120/240V, 60Hz, 30A/50A	Propane	04/05/13	264-270
Class A Motor Home	3309	120/240V, 60Hz, 30A/50A	Propane	04/05/13	271-277
Class A Motor Home	3650	120/240V, 60Hz, 30A/50A	Propane	04/05/13	278-284
Class A Motor Home	3940	120/240V, 60Hz, 30A/50A	Propane	04/05/13	285-291
Class A Motor Home	3103	120/240V, 60Hz, 30A/50A	Propane	04/05/13	292-298
Class A Motor Home	3736	120/240V, 60Hz, 30A/50A	Propane	04/05/13	299-305
Class A Motor Home	4377	120/240V, 60Hz, 30A/50A	Propane	05/01/13	306-312
Class A Motor Home	4373	120/240V, 60Hz, 30A/50A	Propane	05/01/13	313-319
Class A Motor Home	4364	120/240V, 60Hz, 30A/50A	Propane	05/01/13	320-326
Class A Motor Home	3849	120/240V, 60Hz, 30A/50A	Propane	05/01/13	327-333
Class A Motor Home	3610	120/240V, 60Hz, 30A/50A	Propane	05/01/13	334-340
Class A Motor Home	3424	120/240V, 60Hz, 30A/50A	Propane	05/01/13	341-347
Class A Motor Home	4036	120/240V, 60Hz, 30A/50A	Propane	06/04/13	355-361
Class A Motor Home	3911	120/240V, 60Hz, 30A/50A	Propane	06/04/13	348-354
Class A Motor Home	3910	120/240V, 60Hz, 30A/50A	Propane	06/04/13	362-368
Class A Motor Home	4038	120/240V, 60Hz, 30A/50A	Propane	06/04/13	369-375
Class A Motor Home	3022	120/240V, 60Hz, 30A/50A	Propane	06/17/13	376-382
Class A Motor Home	3845	120/240V, 60Hz, 30A/50A	Propane	07/10/13	383-389
Class A Motor Home	4374	120/240V, 60Hz, 30A/50A	Propane	07/10/13	390-396
Class A Motor Home	3306	120/240V, 60Hz, 30A/50A	Propane	07/10/13	397-403
Class A Motor Home	4372	120/240V, 60Hz, 30A/50A	Propane	07/10/13	404-410
Class A Motor Home	3630	120/240V, 60Hz, 30A/50A	Propane	07/10/13	411-417
Class A Motor Home	3847	120/240V, 60Hz, 30A/50A	Propane	07/10/13	418-424
Class A Motor Home	4039	120/240V, 60Hz, 30A/50A	Propane	07/10/13	425-431
Class A Motor Home	4358	120/240V, 60Hz, 30A/50A	Propane	09/13/13	432-438
Class A Motor Home	3738	120/240V, 60Hz, 30A/50A	Propane	09/13/13	439-445
Class A Motor Home	4361	120/240V, 60Hz, 30A/50A	Propane	03/03/14	446-452
Class A Motor Home	4544	120/240V, 60Hz, 30A/50A	Propane	03/03/14	453-459
Class A Motor Home	4552	120/240V, 60Hz, 30A/50A	Propane	03/03/14	460-466
Class A Motor Home	4553 *[1]	120/240V, 60Hz, 30A/50A	Propane	03/03/14	467-473
Class A Motor Home	4554	120/240V, 60Hz, 30A/50A	Propane	03/03/14	474-480
Class A Motor Home	4557	120/240V, 60Hz, 30A/50A	Propane	03/03/14	481-487

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

TYPE	MODEL NAME	ELECTRICAL RATINGS	FUEL	DATE ADDED (MM/DD/YY)	FIGURES (PAGES)
Class A Motor Home	4584	120/240V, 60Hz, 30A/50A	Propane	03/03/14	488-494
Class A Motor Home	4592	120/240V, 60Hz, 30A/50A	Propane	03/03/14	495-501
Class A Motor Home	4593	120/240V, 60Hz, 30A/50A	Propane	03/03/14	502-508
Class A Motor Home	4594	120/240V, 60Hz, 30A/50A	Propane	03/03/14	509-515
Class A Motor Home	4597	120/240V, 60Hz, 30A/50A	Propane	03/03/14	516-522
Class A Motor Home	4599	120/240V, 60Hz, 30A/50A	Propane	03/03/14	523-529
Class A Motor Home	2707	120/240V, 60Hz, 30A/50A	Propane	04/16/14	530-536
Class A Motor Home	3401	120/240V, 60Hz, 30A/50A	Propane	04/16/14	537-543
Class A Motor Home	3402	120/240V, 60Hz, 30A/50A	Propane	04/16/14	544-550
Class A Motor Home	4503	120/240V, 60Hz, 30A/50A	Propane	04/16/14	551-557
Class A Motor Home	4501	120/240V, 60Hz, 30A/50A	Propane	04/16/14	558-564
Class A Motor Home	4381	120/240V, 60Hz, 30A/50A	Propane	04/16/14	565-571
Class A Motor Home	4312	120/240V, 60Hz, 30A/50A	Propane	04/16/14	572-578
Class A Motor Home	4311	120/240V, 60Hz, 30A/50A	Propane	04/16/14	579-585
Class A Motor Home	4003	120/240V, 60Hz, 30A/50A	Propane	04/16/14	586-592
Class A Motor Home	4002	120/240V, 60Hz, 30A/50A	Propane	04/16/14	593-599
Class A Motor Home	3914	120/240V, 60Hz, 30A/50A	Propane	04/16/14	600-606
Class A Motor Home	3913	120/240V, 60Hz, 30A/50A	Propane	04/16/14	607-613
Class A Motor Home	3812	120/240V, 60Hz, 30A/50A	Propane	04/16/14	614-620
Class A Motor Home	3437	120/240V, 60Hz, 30A/50A	Propane	04/16/14	621-627
Class A Motor Home	3802	120/240V, 60Hz, 30A/50A	Propane	04/16/14	628-634
Class A Motor Home	3635	120/240V, 60Hz, 30A/50A	Propane	07/14/14	635-641
Class A Motor Home	3941	120/240V, 60Hz, 30A/50A	Propane	07/14/14	642-649
Class A Motor Home	4313	120/240V, 60Hz, 30A/50A	Propane	07/14/14	650-657
Class A Motor Home	4315	120/240V, 60Hz, 30A/50A	Propane	07/14/14	658-666
Class A Motor Home	3636	120/240V, 60Hz, 30A/50A	Propane	08/20/14	667-675
Class A Motor Home	3919	120/240V, 60Hz, 30A/50A	Propane	08/20/14	676-684
Class A Motor Home	4366	120/240V, 60Hz, 30A/50A	Propane	08/20/14	685-693
Class A Motor Home	2622	120/240V, 60Hz, 30A/50A	Propane	09/18/14	694-700
Class A Motor Home	3612	120/240V, 60Hz, 30A/50A	Propane	09/18/14	701-707
Class A Motor Home	4568	120/240V, 60Hz, 30A/50A	Propane	09/18/14	708-714
Class A Motor Home	4375	120/240V, 60Hz, 30A/50A	Propane	09/18/14	715-724
Class A Motor Home	3745	120/240V, 60Hz, 30A/50A	Propane	11/06/14	725-731
Class A Motor Home	3004	120/240V, 60Hz, 30A/50A	Propane	01/28/15	732-738
Class A Motor Home	3403	120/240V, 60Hz, 30A/50A	Propane	01/28/15	739-745
Class A Motor Home	3903	120/240V, 60Hz, 30A/50A	Propane	01/28/15	746-754
Class A Motor Home	2705	120/240V, 60Hz, 30A/50A	Propane	02/06/15	755-761
Class A Motor Home	3755	120/240V, 60Hz, 30A/50A	Propane	02/06/15	762-768
Class A Motor Home	4519	120/240V, 60Hz, 30A/50A	Propane	02/06/15	769-775
Class A Motor Home	3404	120/240V, 60Hz, 30A/50A	Propane	02/25/15	776-782
Class A Motor Home	3709	120/240V, 60Hz, 30A/50A	Propane	02/25/15	783-789
Class A Motor Home	3922	120/240V, 60Hz, 30A/50A	Propane	02/25/15	790-796
Class A Motor Home	4044	120/240V, 60Hz, 30A/50A	Propane	02/25/15	797-803
Class A Motor Home	4565	120/240V, 60Hz, 30A/50A	Propane	02/25/15	804-812
Class A Motor Home	3726	120/240V, 60Hz, 30A/50A	Propane	03/13/15	813-819
Class A Motor Home	4041	120/240V, 60Hz, 30A/50A	Propane	03/13/15	820-826
Class A Motor Home	4322	120/240V, 60Hz, 30A/50A	Propane	03/13/15	827-837

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

TYPE	MODEL NAME	ELECTRICAL RATINGS	FUEL	DATE ADDED (MM/DD/YY)	FIGURES (PAGES)
Class A Motor Home	3518	120/240V, 60Hz, 30A/50A	Propane	05/27/15	838-844
Class A Motor Home	3710	120/240V, 60Hz, 30A/50A	Propane	05/27/15	845-851
Class A Motor Home	4598	120/240V, 60Hz, 30A/50A	Propane	05/27/15	852-862
Class A Motor Home	3227	120/240V, 60Hz, 30A/50A	Propane	07/08/15	863-869
Class A Motor Home	3712	120/240V, 60Hz, 30A/50A	Propane	07/08/15	870-876
Class A Motor Home	3944	120/240V, 60Hz, 30A/50A	Propane	07/08/15	877-887
Class A Motor Home	4040	120/240V, 60Hz, 30A/50A	Propane	08/28/15	888-894
Class A Motor Home	4316	120/240V, 60Hz, 30A/50A	Propane	08/28/15	895-901
Class A Motor Home	4518	120/240V, 60Hz, 30A/50A	Propane	08/28/15	902-912
Class A Motor Home	3208	120/240V, 60Hz, 30A/50A	Propane	02/18/16	913-919
Class A Motor Home	3427	120/240V, 60Hz, 30A/50A	Propane	02/18/16	920-926
Class A Motor Home	3725	120/240V, 60Hz, 30A/50A	Propane	02/18/16	927-933
Class A Motor Home	4054	120/240V, 60Hz, 30A/50A	Propane	02/18/16	934-940
Class A Motor Home	4513	120/240V, 60Hz, 30A/50A	Propane	02/18/16	941-951
Class A Motor Home	2812	120/240V, 60Hz, 30A/50A	Propane	03/29/16	952-958
Class A Motor Home	3113	120/240V, 60Hz, 30A/50A	Propane	03/29/16	959-965
Class A Motor Home	3412	120/240V, 60Hz, 30A/50A	Propane	03/29/16	966-972
Class A Motor Home	3513	120/240V, 60Hz, 30A/50A	Propane	03/29/16	973-979
Class A Motor Home	3724	120/240V, 60Hz, 30A/50A	Propane	03/29/16	980-986
Class A Motor Home	3925	120/240V, 60Hz, 30A/50A	Propane	03/29/16	987-997
Class A Motor Home	3013	120/240V, 60Hz, 30A/50A	Propane	05/02/16	998-1006
Class A Motor Home	3210	120/240V, 60Hz, 30A/50A	Propane	05/02/16	1007-1015
Class A Motor Home	3923	120/240V, 60Hz, 30A/50A	Propane	05/02/16	1016-1024
Class A Motor Home	4042	120/240V, 60Hz, 30A/50A	Propane	05/02/16	1025-1033
Class A Motor Home	4310	120/240V, 60Hz, 30A/50A	Propane	05/02/16	1034-1042
Class A Motor Home	4533	120/240V, 60Hz, 30A/50A	Propane	05/02/16	1043-1050
Class A Motor Home	3009	120/240V, 60Hz, 30A/50A	Propane	06/30/16	1051-1057
Class A Motor Home	3516	120/240V, 60Hz, 30A/50A	Propane	06/30/16	1058-1064
Class A Motor Home	4326	120/240V, 60Hz, 30A/50A	Propane	06/30/16	1065-1071
Class A Motor Home	4525	120/240V, 60Hz, 30A/50A	Propane	06/30/16	1072-1082
Class A Motor Home	3333	120/240V, 60Hz, 30A/50A	Propane	08/26/16	1083-1091
Class A Motor Home	3902	120/240V, 60Hz, 30A/50A	Propane	08/26/16	1091-1098
Class A Motor Home	4535	120/240V, 60Hz, 30A/50A	Propane	08/26/16	1099-1106
Class A Motor Home	3307	120/240V, 60Hz, 30A/50A	Propane	12/20/16	1107-1115
Class A Motor Home	3918	120/240V, 60Hz, 30A/50A	Propane	12/20/16	1116-1124
Class A Motor Home	4308	120/240V, 60Hz, 30A/50A	Propane	12/20/16	1125-1133
Class A Motor Home	4362	120/240V, 60Hz, 30A/50A	Propane	12/20/16	1134-1142
Class A Motor Home	4534	120/240V, 60Hz, 30A/50A	Propane	12/20/16	1143-1150
Class A Motor Home	4537	120/240V, 60Hz, 30A/50A	Propane	12/20/16	1151-1159
Class A Motor Home	3414	120/240V, 60Hz, 30A/50A	Propane	01/19/17	1160-1167
Class A Motor Home	4327	120/240V, 60Hz, 30A/50A	Propane	01/19/17	1168-1175
Class A Motor Home	4531	120/240V, 60Hz, 30A/50A	Propane	01/19/17	1176-1183
Class A Motor Home	4536	120/240V, 60Hz, 30A/50A	Propane	01/19/17	1184-1191
Class A Motor Home	3532	120/240V, 60Hz, 30A/50A	Propane	03/03/17	1192-1199
Class A Motor Home	3716	120/240V, 60Hz, 30A/50A	Propane	03/03/17	1200-1207
Class A Motor Home	3718	120/240V, 60Hz, 30A/50A	Propane	03/03/17	1208-1215
Class A Motor Home	4046	120/240V, 60Hz, 30A/50A	Propane	03/03/17	1216-1223

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

TYPE	MODEL NAME	ELECTRICAL RATINGS	FUEL	DATE ADDED (MM/DD/YY)	FIGURES (PAGES)
Class A Motor Home	4049	120/240V, 60Hz, 30A/50A	Propane	03/03/17	1224-1231
Class A Motor Home	4052	120/240V, 60Hz, 30A/50A	Propane	03/03/17	1232-1239
Class A Motor Home	3312	120/240V, 60Hz, 30A/50A	Propane	03/27/17	1240-1249
Class A Motor Home	3341	120/240V, 60Hz, 30A/50A	Propane	03/27/17	1250-1258
Class A Motor Home	3343	120/240V, 60Hz, 30A/50A	Propane	03/27/17	1259-1266
Class A Motor Home	3715	120/240V, 60Hz, 30A/50A	Propane	03/27/17	1267-1276
Class A Motor Home	3924	120/240V, 60Hz, 30A/50A	Propane	03/27/17	1277-1286
Class A Motor Home	4047	120/240V, 60Hz, 30A/50A	Propane	03/27/17	1287-1296
Class A Motor Home	3407	120/240V, 60Hz, 30A/50A	Propane	07/11/17	1297-1304
Class A Motor Home	3413	120/240V, 60Hz, 30A/50A	Propane	07/11/17	1305-1312
Class A Motor Home	3901	120/240V, 60Hz, 30A/50A	Propane	07/11/17	1313-1320
Class A Motor Home	4048	120/240V, 60Hz, 30A/50A	Propane	07/11/17	1321-1328
Class A Motor Home	3406	120/240V, 60Hz, 30A/50A	Propane	08/14/17	1329-1336
Class A Motor Home	3713	120/240V, 60Hz, 30A/50A	Propane	08/14/17	1337-1344
Class A Motor Home	3926	120/240V, 60Hz, 30A/50A	Propane	08/14/17	1345-1352
Class A Motor Home	3928	120/240V, 60Hz, 30A/50A	Propane	08/14/17	1353-1360
Class A Motor Home	3014	120/240V, 60Hz, 30A/50A	Propane	12/04/17	1361-1368
Class A Motor Home	3719	120/240V, 60Hz, 30A/50A	Propane	12/04/17	1369-1376
Class A Motor Home	3408	120/240V, 60Hz, 30A/50A	Propane	12/04/17	1377-1384
Class A Motor Home	4348	120/240V, 60Hz, 30A/50A	Propane	12/04/17	1384-1392
Class A Motor Home	2813	120/240V, 60Hz, 30A/50A	Propane	01/04/18	1393-1400
Class A Motor Home	3345	120/240V, 60Hz, 30A/50A	All Electric	01/04/18	1401-1406
Class A Motor Home	3627	120/240V, 60Hz, 30A/50A	Propane	01/04/18	1407-1414
Class A Motor Home	3717	120/240V, 60Hz, 30A/50A	Propane	01/04/18	1415-1422
Class A Motor Home	4328	120/240V, 60Hz, 30A/50A	Propane	01/04/18	1423-1430
Class A Motor Home	3626	120/240V, 60Hz, 30A/50A	Propane	02/26/18	1431-1438
Class A Motor Home	4579	120/240V, 60Hz, 30A/50A	Propane	02/26/18	1439-1446
Class A Motor Home	4576	120/240V, 60Hz, 30A/50A	Propane	02/26/18	1447-1454
Class A Motor Home	4551	120/240V, 60Hz, 30A/50A	All Electric	02/26/18	1455-1460
Class A Motor Home	3927	120/240V, 60Hz, 30A/50A	Propane	02/26/18	1461-1468
Class A Motor Home	3008	120/240V, 60Hz, 30A/50A	Propane	04/18/18	1469-1476
Class A Motor Home	3226	120/240V, 60Hz, 30A/50A	Propane	04/18/18	1477-1484
Class A Motor Home	3426	120/240V, 60Hz, 30A/50A	Propane	04/18/18	1485-1492
Class A Motor Home	3609	120/240V, 60Hz, 30A/50A	Propane	04/18/18	1493-1500
Class A Motor Home	3646	120/240V, 60Hz, 30A/50A	Propane	04/18/18	1501-1508
Class A Motor Home	3722	120/240V, 60Hz, 30A/50A	Propane	04/18/18	1509-1516
Class A Motor Home	4045	120/240V, 60Hz, 30A/50A	Propane	04/18/18	1517-1524
Class A Motor Home	4543	120/240V, 60Hz, 30A/50A	All Electric	04/18/18	1525-1530
Class A Motor Home	4549	120/240V, 60Hz, 30A/50A	All Electric	04/18/18	1531-1536
Class A Motor Home	4550	120/240V, 60Hz, 30A/50A	Propane	04/18/18	1537-1544
Class A Motor Home	3419	120/240V, 60Hz, 30A/50A	Propane	05/28/18	1545-1552
Class A Motor Home	3608	120/240V, 60Hz, 30A/50A	Propane	05/28/18	1553-1560
Class A Motor Home	3723	120/240V, 60Hz, 30A/50A	Propane	05/28/18	1561-1568
Class A Motor Home	4363	120/240V, 60Hz, 30A/50A	Propane	05/28/18	1569-1576
Class A Motor Home	4546	120/240V, 60Hz, 30A/50A	All Electric	05/28/18	1577-1583
Class A Motor Home	2722	120/240V, 60Hz, 30A/50A	Propane	07/26/18	1584-1591
Class A Motor Home	3628	120/240V, 60Hz, 30A/50A	Propane	07/26/18	1592-1599

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

TYPE	MODEL NAME	ELECTRICAL RATINGS	FUEL	DATE ADDED (MM/DD/YY)	FIGURES (PAGES)
Class A Motor Home	3543	120/240V, 60Hz, 30A/50A	All Electric	02/22/19	1600-1605
Class A Motor Home	3545	120/240V, 60Hz, 30A/50A	All Electric	02/22/19	1606-1611
Class A Motor Home	3929	120/240V, 60Hz, 30A/50A	Propane	02/22/19	1612-1619
Class A Motor Home	4569	120/240V, 60Hz, 30A/50A	All Electric	02/22/19	1620-1625
Class A Motor Home	3112	120V, 60Hz, 30A	Propane	06/11/19	1626-1633
Class A Motor Home	4081	120/240V, 60Hz, 30A/50A	Propane	06/11/19	1634-1641
Class A Motor Home	4559	120/240V, 60Hz, 30A/50A	Propane	06/11/19	1642-1649
Class A Motor Home	3005	120/240V, 60Hz, 30A/50A	Propane	08/23/19	1650-1657
Class A Motor Home	3315	120/240V, 60Hz, 30A/50A	Propane	08/23/19	1658-1665
Class A Motor Home	3541	120/240V, 60Hz, 30A/50A	All Electric	08/23/19	1666-1671
Class A Motor Home	3616	120/240V, 60Hz, 30A/50A	Propane	08/23/19	1672-1679
Class A Motor Home	2905	120/240V, 60Hz, 30A/50A	Propane	12/19/19	1680-1687
Class A Motor Home	3747	120/240V, 60Hz, 30A/50A	Propane	12/19/19	1688-1695
Class A Motor Home	3811	120/240V, 60Hz, 30A/50A	Propane	02/24/20	1696-1704
Class A Motor Home	4011	120/240V, 60Hz, 30A/50A	Propane	02/24/20	1705-1713
Class A Motor Home	4118	120/240V, 60Hz, 30A/50A	Propane	02/24/20	1713-1723
Class A Motor Home	4067	120/240V, 60Hz, 30A/50A	Propane	06/11/20	1724-1731
Class A Motor Home	4102	120/240V, 60Hz, 30A/50A	Propane	06/11/20	1732-1739
Class A Motor Home	4578	120/240V, 60Hz, 30A/50A	Electric	06/11/20	1740-1745
Class A Motor Home	4354	120/240V, 60Hz, 30A/50A	Propane	20/10/20	1756-1753
Class A Motor Home	4583	120/240V, 60Hz, 30A/50A	Electric	20/10/20	1754-1759
Class A Motor Home	4329	120/240V, 60Hz, 30A/50A	Propane	20/10/20	1760-1767
Class A Motor Home	3316	120/240V, 60Hz, 30A/50A	Propane	25/02/21	1830-1837
Class A Motor Home	4334	120/240V, 60Hz, 30A/50A	Propane	25/02/21	1838-1845
Class A Motor Home	4589	120/240V, 60Hz, 30A/50A	Propane	25/02/21	1846-1853
Class A Motor Home	3416	120/240V, 60Hz, 30A/50A	Propane	26/05/21	1854-1861
Class A Motor Home	2720	120/240V, 60Hz, 30A/50A	Propane	25/05/22	1874-1881
Class A Motor Home	2920	120/240V, 60Hz, 30A/50A	Propane	25/05/22	1882-1889
Class A Motor Home	3020	120/240V, 60Hz, 30A/50A	Propane	25/05/22	1890-1897
Class A Motor Home	3225	120/240V, 60Hz, 30A/50A	Propane	25/05/22	1898-1905
Class A Motor Home	3629	120/240V, 60Hz, 30A/50A	Propane	25/05/22	1906-1913
Class A Motor Home	3737	120/240V, 60Hz, 30A/50A	Propane	25/05/22	1914-1921
Class A Motor Home	3947	120/240V, 60Hz, 30A/50A	Propane	25/05/22	1922-1929
Class A Motor Home	4521	120/240V, 60Hz, 30A/50A	Propane	25/05/22	1930-1937
Class A Motor Home	4586	120/240V, 60Hz, 30A/50A	Propane	25/05/22	1938-1945
Class A Motor Home	4595	120/240V, 60Hz, 30A/50A	Electric	25/05/22	1946-1951
Class A Motor Home	4596	120/240V, 60Hz, 30A/50A	Electric	25/05/22	1952-1959
Class A Motor Home	4068	120/240V, 60Hz, 30A/50A	Propane	25/05/22	1960-1967
Class A Motor Home	4071	120/240V, 60Hz, 30A/50A	Propane	25/05/22	1968-1975
Class A Motor Home	4325	120/240V, 60Hz, 30A/50A	Propane	25/05/22	1976-1983
Class A Motor Home	4370	120/240V, 60Hz, 30A/50A	Propane	25/05/22	1984-1991

The following Tandem Axle Fifth Wheel models are included in this report:
Product Lines: Cypress, Kountry Aire, Torrey Pine, X-Aire
Prefixes describing the product line are added to the floor plan designation to indicate the model number.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

TYPE	MODEL NAME	ELECTRICAL RATINGS	FUEL	DATE ADDED (MM/DD/YY)	FIGURES (PAGES)
Fifth Wheel Trailer	34KSRF	120/240V, 60Hz, 30A/50A	Propane	03/06/09	-
Fifth Wheel Trailer	35KARF	120/240V, 60Hz, 30A/50A	Propane	03/06/09	-
Fifth Wheel Trailer	35KSLS	120/240V, 60Hz, 30A/50A	Propane	03/06/09	-

The following Class C Motor Home models are included in this report:
Product Lines: Super Star, Supreme Aire
Prefixes describing the product line are added to the floor plan designation to indicate the model number.

TYPE	MODEL NAME	ELECTRICAL RATINGS	FUEL	DATE ADDED (MM/DD/YY)	FIGURES (PAGES)
Class C Motor Home	4573	120/240V, 60Hz, 30A/50A	Electric	20/10/20	1768-1773
Class C Motor Home	4575	120/240V, 60Hz, 30A/50A	Electric	20/10/20	1774-1779
Class C Motor Home	4577	120/240V, 60Hz, 30A/50A	Electric	20/10/20	1780-1785
Class C Motor Home	3746	120/240V, 60Hz, 30A/50A	Propane	20/10/20	1786-1793
Class C Motor Home	4051	120/240V, 60Hz, 30A/50A	Propane	20/10/20	1794-1801
Class C Motor Home	4058	120/240V, 60Hz, 30A/50A	Propane	20/10/20	1802-1809
Class C Motor Home	4061	120/240V, 60Hz, 30A/50A	Propane	20/10/20	1810-1817
Class C Motor Home	3727	120/240V, 60Hz, 30A/50A	Electric	23/12/20	1818-1823
Class C Motor Home	4059	120/240V, 60Hz, 30A/50A	Electric	23/12/20	1824-1829
Class C Motor Home	4065	120/240V, 60Hz, 30A/50A	Electric	26/05/21	1862-1867
Class C Motor Home	4590	120/240V, 60Hz, 30A/50A	Electric	26/05/21	1868-1873
Class C Motor Home	3729	120/240V, 60Hz, 30A/50A	Electric	25/05/22	1992-1997
Class C Motor Home	4509	120/240V, 60Hz, 30A/50A	Electric	25/05/22	1998-2003
Class C Motor Home	4530	120/240V, 60Hz, 30A/50A	Electric	25/05/22	2004-2009

Please also refer to the following projects to find other products that are certified by QAI:
REC563-1, dated February 20, 2009.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

TABLE OF CONTENTS

1 CONDITIONS OF ACCEPTANCE: 13
2 MARKINGS (ENGLISH AND FRENCH): 14
2.1 Marking Methods: 14
2.2 General Marking: 14
2.3 Required Markings: 15
2.4 Conditional Required Markings: 16
3 OWNER'S MANUAL: 20
3.1 Cargo transportation space 20
3.2 Safety chain to the towing vehicle 20
3.3 Appliances 20
4 ALTERATIONS: 21
5 FACTORY TESTS: 22
5.1 General requirements for recreational vehicles: 22
5.2 Vehicular 22
5.3 Plumbing 22
5.4 Propane 23
5.5 Electrical 25
6 DESCRIPTION: 26
6.1 Exclusions 26
6.2 General Safety Requirements: 26
6.3 Vehicular Requirements: 30
6.4 Plumbing Requirements: 32
6.5 Propane Installation: 35
6.6 Electrical Requirements: 38

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

1 CONDITIONS OF ACCEPTANCE:

1. Products are in compliance with this report before they are labeled with the QAI logo.
2. The manufacturer's Transport Canada compliance label must be placed on each recreational vehicle prior to the application of the cQAI mark.
3. Appliance manuals and instructions are provided with the recreational vehicle.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

2 MARKINGS (ENGLISH AND FRENCH):

2.1 Marking Methods:

2.1.1 Marking Method A:

Class III permanent label – made of material not affected by water, it shall be attached by means of non-water-soluble adhesive and shall comply with the quality of adhesion test described in Clause 13.1 of CSA standard Z240.4.2-14. These materials shall not be located on surfaces having temperatures exceeding 79 deg C.

2.1.2 Marking Method B:

Permanent plate made of metal having a minimum thickness of 0.30mm, securely attached by mechanical means (anodized aluminum, riveted, is acceptable).

2.1.3 Warning and Caution Labels:

Warnings and Cautions shall be written in text having a minimum height of 2mm on a contrasting background.

2.2 General Marking:

2.2.1 Recreational vehicle Specification Nameplate (QAI Label No 1040):

Each recreational vehicle is marked with the following label:

Black lettering on White background, Size: 8 ½ inches by 11 inches - includes Manufacturer's Name and Address, Model Designation, Month and Year of Manufacture, Rated Input Voltage, Frequency, Amperes or Volt-Amperes Input, All Factory Installed Appliances, Model and Listing Label Serial Number. The Specification Nameplate is typically located on the interior of a kitchen cabinet door.

2.2.2 Vehicle identification requirements

Each recreational vehicle (excluding slide-in campers) has the following information, in English and/or French, permanently marked in a readily visible location in the interior or beside the Transport Canada compliance label of the unit:

a) Vehicle identification number, as defined in CMVSS-115
b) GVWR. The gross vehicle weight rating is determined and marked in accordance with Transport Canada publications MVSR 1985 and MVSR 1998.
c) Vertical tongue load range
d) Recommended tire size or sizes, and cold tire inflation pressures for each such tire size for the GVWR
e) Recommended maximum cargo carrying capacity

Note: *These markings are located on the Recreational vehicle Specification Nameplate (QAI Label No 1040)*

2.2.3 The following RV label:

a. QAI Label # 1045: White Lettering on Blue (Tandem Axle Travel Trailer) Size: 3 ½ inches in diameter.
b. QAI Label # 1046: White Lettering on Scarlet (Motorhome) Size: 3 ½ inches in diameter.

Note: *Labels include the QAI logo with 'c' identifier, the label serial number, and the wording "CSA Z240 Series". The label is typically posted on the exterior of the recreational vehicle near the main entranceway.*

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

2.3 Required Markings:

2.3.1 Interior (marking method A):

2.3.1.1 Alternate exits

Alternate exits are labeled with the words “EXIT” and/or “SORTIE” in red letters a minimum of 12 mm (0.47 in) in height on a contrasting background.

2.3.1.2 Smoke detector

A warning label, in English and French, with the word “WARNING” and “AVERTISSEMENT” a minimum of 6.35 mm (1/4 in) high and body text a minimum of 3.175 mm (1/8 in) high on a contrasting background shall be permanently affixed in a visible location on or within 610 mm (24 in) of the smoke alarm and shall read as follows:

WARNING:
TEST SMOKE ALARM OPERATION AFTER VEHICLE HAS BEEN IN STORAGE, BEFORE EACH TRIP, AND AT LEAST ONCE PER WEEK DURING USE. FAILURE TO DO SO CAN RESULT IN DEATH OR SERIOUS INJURY.

AVERTISSEMENT:
VERIFIER L’AVERTISSEUR DE FUMEE SI LE VEHICULE A ETE ENTREPOSE, AVANT CHAQUE DEPLACEMENT ET AU MOINS UNE FOIS PAR SEMAINE EN SERVICE. L’ABSENCE DE VERIFICATION PEUT ENTRAINER DES BLESSURES GRAVES OU LA MORT.

2.3.1.3 Air for combustion for cooking ranges

A label in both English and French with the words “WARNING” and “DANGER” with letters a minimum of 6.35 mm (1/4 in) high and body text a minimum of 3.175 mm (1/8 in) high on a contrasting background shall be permanently affixed in a visible location adjacent to fuel-burning ranges and shall read as follows:

DANGER:
DO NOT USE GAS COOKING APPLIANCES FOR COMFORT HEATING. CAN LEAD TO CARBON MONOXIDE POISONING, WHICH CAN LEAD TO DEATH OR SERIOUS INJURY.

WARNING:
GAS COOKING APPLIANCES NEED FRESH AIR FOR SAFE OPERATION. BEFORE OPERATING: OPEN VENTS OR WINDOWS SLIGHTLY OR TURN ON EXHAUST FAN PRIOR TO USING COOKING APPLIANCE. GAS FLAMES CONSUME OXYGEN, WHICH SHOULD BE REPLACED TO ENSURE PROPER COMBUSTION. IMPROPER USE CAN RESULT IN DEATH OR SERIOUR INJURY.

DANGER:
NE PAS UTILISER D’APPAREILS DE CUISSON POUR LE CHAUFFAGE DES LOCAUX. UNE TELLE UTILISATION PEUT CAUSER UN EMPOISONNEMENT AU MONOXYDE DE CARBONE QUI PEUT ENTRAINER DES BLESSURES GRAVES OU LA MORT.

AVERTISSEMENT:
LES APPAREILS DE CUISSON AU GAZ NECESSITENT UN APPORT D’AIR FRAIS POUR FONCTIONNER EN TOUTE SECURITE. AVANT L’UTILISATION: OUVRIR LES EVENTS OU ENTROUVRIR DES FENETRES OU ACTIONNER LA HOTTE AVANT D’UTILISER UN APPAREIL DE CUISSON. LES FLAMMES DE GAZ CONSUMENT DE L’OXYGENE QUI DEVRAIT ETRE REMPLACE POUR ASSURER UNE COMBUSION ADEQUATE. UNE MAUVAISE UTILISATION PEUT ENTRAINER DES BLESSURES GRAVES OU LA MORT.

2.3.1.4 Replacement fuse

The size of replacement fuse is marked adjacent to the fuse holder.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

2.3.1.5 The ampere rating of overcurrent devices

Overcurrent devices must be prominently marked adjacent to the respective branch circuit they protect.

2.3.2 Exterior (marking method A):

Each recreational vehicle shall have a label in English and French permanently affixed in a visible location at or near each propane supply connection or at the end of the piping. The label shall contain the word “WARNING” and “AVERTISSEMENT” and "with letters a minimum of 6.35 mm (1/4 in) high and body text a minimum of 3.175 mm (1/8 in) high on a contrasting background, that reads as follows:

> **WARNING:**
> THIS PROPANE PIPING SYSTEM IS DESIGNED FOR USE WITH PROPANE ONLY. DO NOT CONNECT NATURAL GAS TO THIS SYSTEM. SECURELY CAP INLET WHEN NOT CONNECTED FOR USE. AFTER TURNING ON PROPANE, EXCEPT AFTER NORMAL CYLINDER REPLACEMENT, TEST PROPANE PIPING AND CONNECTIONS TO APPLIANCES FOR LEAKAGE WITH SOAPY WATER OR BUBBLE SOLUTION. DO NOT USE PRODUCTS THAT CONTAIN AMMONIA OR CHLORINE TO TEST FOR LEAKS. MAY LEAD TO A FIRE OR EXPLOSION, WHICH COULD RESULT IN DEATH OR SERIOUS INJURY.
>
> **AVERTISSEMENT:**
> CETTE TUYAUTERIE DE PROPANE EST CONÇUE POUR N’ETRE UTILISEE QU’AVEC DU PROPANE. NE PAS L’UTILISER POUR DU GAS NATUREL. BIEN CAPUCHONNER L’ENTREE DE LA TUYAUTERIE LORSQU’ELLE N’EST PAS RACCORDEE. APRES AVOIR OUVERT LA VANNE DU PROPANE, SAUF LORS DU REMPLACEMENT NORMAL DU CYLINDRE, FAIRE UN ESSAI D’ETANCHEITE DE LA TUYAUTERIE DE PROPANE ET DES RACCORDS AUX APPAREILS A L’AIDE D’EAU SAVONNEUSE OU D’UNE SOLUTION QUI PRODUIT DES BULLES. NE PAS EFFECTUER D’ESSAI D’ETANCHEITE A L’AIDE D’AMMONIAC OU DE CHLORE. LE NON-RESPECT DE CETTE INSTRUCTION PEUT CAUSER UN INCENDIE OU UNE EXPLOSION, CE QUI POURRAIT ENTRAINER DES BLESSURES GRAVES OU LA MORT.

2.4 Conditional Required Markings:

The following additional Markings may be required in order to demonstrate compliance with CSA Z240 series of standards:

2.4.1 Interior (marking method A):

2.4.1.1 Where privacy curtains cannot meet specified clearance requirements for ranges

A warning label, in both English and French, with the word “WARNING” and “AVERTISSEMENT” with letters a minimum of 6.35 mm (1/4 in) high and body text a minimum of 3.175 mm (1/8 in) high on a contrasting background, shall be permanently affixed in a visible location adjacent to the applicable appliance(s) and shall read as follows:

> **WARNING:**
> DO NOT OPERATE THIS APPLIANCE UNLESS THE PRIVACY CURTAIN IS SECURED AWAY FROM THE APPLIANCE OR REMOVED. CAN CAUSE A FIRE, WHICH COULD RESULT IN DEATH OR SERIOUS INJURY.
>
> **AVERTISSEMENT:**
> NE PAS UTILISER CET APPAREIL SANS AVOIR FIXE LE RIDEAU SEPARATEUR LOIN DE L’APPAREIL OU SANS AVOIR RETIRE CE RIDEAU. LE NON-RESPECT DE CETTE INSTRUCTION PEUT CAUSER UN INCENDIE, CE QUI POURRAIT ENTRAINER DES BLESSURES GRAVES OU LA MORT.

2.4.1.2 Where cargo transportation space is an integral part of the recreational vehicle

A warning label must be located adjacent to each entry and is visible to anyone entering the recreational vehicle, printed with red letters on white background with the word “DANGER” not less than 19.05 mm (3/4 in) high and the body text in letter not less than 6.35 mm (1/4 in) high, and with the letters on a contrasting background, and the following wording:

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

DANGER
VEHICLES AND EQUIPMENT POWERED BY INTERNAL COMBUSTION ENGINES AND PLACED IN RECREATIONAL VEHICLES CAN CAUSE CARBON MONOXIDE POISONING OR ASPHYXIATION, WHICH COULD RESULT IN DEATH OR SERIOUS INJURY.

THE FLAMMABLE LIQUIDS USED TO POWER THESE ITEMS CAN CAUSE A FIRE OR EXPLOSION, WHICH CAN RESULT IN DEATH OR SERIOUS INJURY.

TO REDUCE RISK:
A) DO NOT RIDE IN THE VEHICLE STORAGE AREA WHEN VEHICLES ARE PRESENT.
B) DO NOT SLEEP IN THE VEHICLE STORAGE AREA WHEN VEHICLES ARE PRESENT.
C) CLOSE DOORS AND WINDOWS IN WALLS OF SEPARATION (IF INSTALLED) WHEN ANY VEHICLE IS PRESENT.
D) RUN FUEL OUT OF ENGINES OF STORED VEHICLES AFTER SHUTTING OFF FUEL AT THE THANK.
E) DO NOT STORE, TRANSPORT, OR DISPENSE FUEL INSIDE THIS VEHICLE.
F) OPEN THE WINDOWS, OPENINGS, OR AIR VENTILATION SYSTEMS PROVIDED FOR VENTING THE TRANSPORTATION AREA WHEN VEHICLES ARE PRESENT.
G) DO NOT OPERATE PROPANE APPLIANCES, PILOT LIGHTS, AND ELECTRICAL EQUIPMENT WHEN MOTORIZED VEHICLES ARE PRESENT.

DANGER
LES VÉHICULES ET L'ÉQUIPEMENT PROPULSE PAR UN MOTEUR A COMBUSTION INTERNE PLACE DANS UN VEHICULE DE CAMPING PEUVENT CAUSER UN EMPOISONNEMENT AU MONOXYDE DE CARBONE OU L'ASPHYXIE, CE QUI POURRAIT ENTRAINER DES BLESSURES GRAVES OU LA MORT.

LES LIQUIDES INFLAMMABLES UTILISES POUR PROPULSER CES MACHINES PEUVENT CAUSER UN INCENDIE OU UNE EXPLOSION, CE QUI PEUT ENTRAINER DES BLESSURES GRAVES OU LA MORT.

POUR REDUIRE LE RISQUE :
A) NE PAS CIRCULER DANS L'AIRE DE RANGEMENT DU VEHICULE SI DES VEHICULES S'YTROUVENT.
B) NE PAS DORMIR DANS L'AIRE DE RANGEMENT DU VEHICULE SI DES VEHICULES S'YTROUVENT.
C) FERMER LES PORTES ET FENETRES QUI SE TROUVENT DANS LES CLOISONS (LE CAS ECHEANT) SI AU MOINS UN VEHICULE EST ENTREPOSE.
D) EPUISER LE CARBURANT CONTENU DANS LES MOTEURS DES VEHICULES ENTREPOSES APRES AVOIR COUPE L'ALIMENTATION EN CARBURANT AU RESERVOIR.
E) NE PAS ENTREPOSER, TRANSPORTER OU DISTRIBUER DE CARBURANT A L'INTERIEUR DE CE VEHICULE.
F) OUVRIR LES FENETRES, OUVERTURES OU SYSTEMES DE VENTILATION D'AIR FOURNIS POUR VENTILER LA ZONE DE TRANSPORT LORSQUE DES VEHICULES S'YTROUVENT.
G) NE PAS FAIRE FONCTIONNER D'APPAREILS AU PROPANE, DE VEILLEUSES OU D'EQUIPEMENT ELECTRIQUE EN PRESENCE DE VEHICULES MOTORISES.

2.4.1.3 Where cargo transportation space is separated by wall and there is opening in the floor

A warning label must be located inside the vehicle and is visible to anyone entering the cargo area , begin with the word "WARNING" and "AVERTISSEMENT" not less than 16 mm (5/8 in) high and the body text in letter not less than 10 mm (3/8 in), with the following wording:

WARNING
DO NOT SLEEP IN THIS AREA. CARBON MONOXIDE OR OTHER HARMFUL VAPORS COULD ENTER THE AREA THROUGH THE FLOOR OPENINGS, WHICH COULD RESULT IN DEATH OR SERIOUS INJURY.

AVERTISSEMENT
NE PAS DORMIR DANS CETTE AIRE. DU MONOXYDE DE CARBONE OU D'AUTRES VAPEURS NOCIVES POURRAIENT Y PENETRER PAR DES OUVERTURES DANS LE PLANCHER ET ENTRAINER DES BLESSURES GRAVES OU LA MORT.

2.4.1.4 Receptacles in cabinets or like enclosures for use with specific appliances

Must have a label affixed adjacent to the receptacle indicating the specific type of appliance intended and the circuit ratings for the receptacle.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

2.4.1.5 Where a circuit is not connected to a load

The outlet needs to be marked on the outlet box to identify the purpose of the circuit, circuit voltage and circuit ampacity.

2.4.1.6 Where cargo transportation space that is an integral part of the RV is provided

A label is affixed to the interior of the vehicle including the word “Warning” and an explanation of loading securement and proper weight distribution for the RV. The word “Warning” is in letters not less than 6 mm high and the explanation is in letters not less than 3 mm high.

2.4.1.7 Where the gas supply has a quick disconnect

A readily visible permanent label in both English and French is provided in the area of the quick-disconnect fitting with a minimum size of 50 mm x 100 mm (2 x 4 in) with the wording:

CAUTION:
SHUT OFF GAS SUPPLY BEFORE DISCONNECTING APPLIANCE

ATTENTION:
COUPER LE GAZ AVANT DE DECONNECTER L’APPAREIL

2.4.2 Exterior (marking method A):

2.4.2.1 Recreational vehicles equipped with fuel-dispensing systems

A bilingual label with a minimum 6 mm (1/4 in) high red block letters on a contrasting background and made of material that does not deteriorate when in contact with petroleum-based products shall be placed adjacent to the shutoff valve or valve control and read as follows:

FUEL DISPENSING SYSTEM

EMERGENCY SHUTOFF SWITCH

SYSTEM D’AVITAILLEMENT EN CARBURANT

INTERRUPTEUR D’ARRET D’URGENCE

Must have the following warning label in a location visible to the operator during dispensing of fuel from the recreational vehicle, printed with red block letters on a contrasting background with the word “DANGER” not less than 16 mm (5/8 in) high and the body text in letter not less than 9.5 mm (3/8 in):

DANGER

NO SMOKING

BEFORE DISPENSING FUEL, TURN OFF ALL ENGINES, FUEL-BURNING APPLIANCES, AND THEIR IGNITORS (SEE OPERATING INSTRUCTIONS). DO NOT DISPNSE FULE WITHIN 6 METRES (20 FEET) OF AN IGNITION SOURCE. CAN CAUSE IGNITION OF FLAMMABLE VAPORS, WHICH CAN LEAD TO A FIRE OR EXPLOSION AND RESULT IN DEATH OR SERIOUS INJURY.

DANGER

DÉFENSE DE FUMER. AVANT D’AVITAILLER LE VÉHICULE, COUPES TOUS LES MOTEURS ET ÉTEINDRE TOUS LES APPAREILS À COMBUSTIBLES ET LEURS DISPOSITIFS D’ALLUMAGE (VOIR LES INSTRUCTIONS D’UTILISATION). NE PAS AVITAILLER UN VÉHICULE À MOINS DE 6 MÉTIERS (20 PIEDS) D’UNE SOURCE D’ALLUMAGE. L’AVITAILLEMENT DE

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

CARBURANT PEUT CAUSER L'INFLAMMATION SPONTANEE DE VAPEURS INFLAMMABLES, CE QUI PEUT CAUSER UN INCENDIE OU UNE EXPLOSION ET ENTRAINER DES BLESSURES GRAVES OU LA MORT.

2.4.2.2 For recreational vehicles with fuel fill systems (excludes vehicular fuel system)

A label is located adjacent to the fuel filler cap indicating the type of fuel to be used.

2.4.2.3 Each recreational vehicle having exterior combustion air inlet(s) at or below the roof (Applies to Motor Homes, Slide in Campers, and Fuel Dispensing Units only)

Each recreational vehicle with a fuel fill and a propane appliance having an exterior combustion air inlet(s) at a level below the roof shall have a danger label in English and French. The label shall contain the word "DANGER" with letters a minimum of 6.35 mm (1/4 in) high and body text a minimum of 3.176 mm (1/8 in) high on a contrasting background. The label shall be permanently affixed in a visible location near the fuel filler spout and the propane container and shall read as follows:

DANGER:

ALL PILOT LIGHTS, APPLIANCES AND THEIR IGNITERS (SEE OPERATING INSTRCTIONS) SHALL BE TURNED OFF BEFORE REFUELING OF MOTOR FUEL TANKS AND/OR PROPANE CONTAINERS. CAN CAUSE IGNITION OF FLAMMABLE VAPOR, WHICH CAN LEAD TO A FIRE OR EXPLOSION AND RESULT IN DEATH OR SERIOUS INJURY.

DANGER :

ÉTEIGNES LES VEILLEUSES, LES APPAREILS ET LEUR DISPOSITIF D'ALLUMAGE (VOIR LES INSTRUCTIONS D'UTILISATION) AVANT LE REMPLISSAGE DES RÉSERVOIRS DE CARBURANT ET (OU) DES BOUTEILLES DE PROPANE. L'AVITAILLEMENT DE CARBURANT PEUT CAUSER L'INFLAMMATION SPONTANEE DE VAPEURS INFLAMMABLES, CE QUI PEUT CAUSER UN INCENDIE OU UNE EXPLOSION ET ENTRAINER DES BLESSURES GRAVES OU LA MORT.

2.4.2.4 Recreational vehicles equipped with outdoor cooking area

Where an outside cooking area is provided, a permanent warning label with the word "WARNING" and "AVERTISSEMENT" with minimum 6 mm (1⁄4 in) high letters and body text with minimum 3 mm (1/8 in) high letters on a contrasting background shall be affixed in a visible location near the exterior cooking area and shall read as follows:

WARNING:

WHEN USING THIS OUTDOOR COOKING AREA: THE VEHICLE MUST BE LEVEL AND STABILIZED.
DO NOT VIOLATE THE MANUFACTURER'S' INSTRUCTIONS ON REQUIRED CLEARANCES FOR COOKING APPLIANCES DURING USE. DO NOT STORE COOKING APPLIANCES UNTIL COOL TO THE TOUCH. FAILURE TO COMPLY COULD RESULT IN A FIRE OR PERSONAL INJURY.

AVERTISSEMENT:

LORSQUE L'AIRE DE CUISSON EXTÉRIEURE EST UTILISÉE: LE VÉHICULE DOIT ÊTRE DE NIVEAU ET STABILISÉ.
NE PAS ALLER À L'ENCONTRE DES INSTRUCTIONS DU FABRICANT SUR LES DÉGAGEMENTS REQUIS AUTOUR DES APPAREILS DE CUISSON PENDANT LEUR UTILISATION. NE PAS RANGER L'APPAREIL DE CUISSON AVANT QUE CE DERNIER SOIT FROID AU TOUCHER. LE NON-RESPECT DE CES CONSIGNES POURRAIT ENTRAÎNER UN INCENDIE OU DES BLESSURES.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

3 OWNER'S MANUAL:

Instructions are provided with each recreational vehicle including the following as a minimum:

3.1 Cargo transportation space

Where cargo transportation space is an integral part of the Recreational vehicle, the owner's manual includes a statement warning of the hazard of transporting or storing vehicles powered by an internal combustion engine (as described in clause 1.3.1.2 of this report) and a statement explaining loading securement and proper weight distribution.

3.2 Safety chain to the towing vehicle

The owner's manual includes instructions on the preferred method of attaching the safety chain between towing and towed vehicle. These instructions show that, when attached, the slack for each length of chain between the trailer and towing vehicle is the same and is not more than necessary to permit the vehicles to turn at their minimum radius, and that, when passing forward to the towing vehicle, the chains are oriented in a manner designed to prevent the tongue from dropping to the ground and to maintain connection in the event of failure of the primary connecting system.

3.3 Appliances

Appliance operating instructions are left within the vehicle.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

4 ALTERATIONS:

- Quality control tests are performed and documented as described in this evaluation report
- Markings as described in this evaluation report and the CSA Z240 RV Series (2014) standard are affixed to all applicable products
- Compounds used in pipe and fitting joints and used in propane systems, are certified to CAN/ULC-S642 and intended for use with propane
- Hot air supply ducts (if not made of galvanized steel, tin-plated steel, or aluminum) are Class 1 air ducts certified to CAN/ULC-S110
- Copper tubing used in propane systems conforms to the requirements of ASTM B88 and is type K or L
- A 50 amp electrical panel has a maximum of 12 total branch circuits not including the main
- There are no more than 12 outlets on a 2-wire general-purpose branch circuit
- Converter is on its own separate circuit
- Every model is vented with a 1-1/2” vent pipe through the roof. Each vent pipe serves not more than four fixture traps, one of which may be a water closet
- The macerating stool can be removed to allow a cleaning tool to enter and clean the drainage pipe
- Entire plumbing system can be cleaned with a cleaning tool without passing through more than 360° change in direction
- Model is vented with a 2” vent pipe through the roof when the unit is equipped with two water closets
- Every model with vertical drainage lines connecting to horizontal drainage lines or horizontal drainage lines connecting to other horizontal drainage lines are entered through 45° Y branches, long-turn TY branches, or combinations of fittings of equivalent sweep
- There are no more than 3 plumbing fixtures draining into a 1-1/2” drainpipe line.
- Flexible drain hose assemblies can be removed to provide entry for drain piping cleanout.
- Pump provided for assisting of waste drainage comes with removable fittings to allow accessibility for cleaning out the piping.
- GFCI outlets are provided in bathrooms and areas that may expose user to electric shock.
- Each kitchen counterspace separated by a traffic aisle is equipped with a general-purpose receptacle.
- Light fixtures in shower stalls are rated for wet use
- Wet vents serve no more than 3 fixtures

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

5 FACTORY TESTS:

WARNING
THE FACTORY TESTS SPECIFIED MAY PRESENT A HAZARD OF INJURY TO PERSONNEL AND/OR PROPERTY AND SHOULD ONLY BE PERFORMED BY PERSONS KNOWLEDGEABLE OF SUCH HAZARDS AND UNDER CONDITIONS DESIGNED TO MINIMIZE THE POSSIBILITY OF INJURY.

All tests are conducted on each recreational vehicle. Tests are administered at the completion of manufacture of the system to be tested.

5.1 General requirements for recreational vehicles:

5.1.1 Fuel Distribution System

The fuel distribution system shall be proven by test to be leak free by maintaining a minimum air pressure of 6.9 kPa (1 psi) for at least 10 min.

5.2 Vehicular

5.2.1 Brake Adjustment and Electrical Check

Prior to shipment, each production unit recreational vehicle is checked according to the procedures described below:

1. The brake on each wheel of each production unit is checked for adjustment according to the brake manufacturer's recommendations
2. When connected to a fully charged battery of the correct voltage and adequate capacity to maintain the rated voltage under test load, the current draw from the battery through the braking system is equal +-10% the rated current draw of an individual magnet multiplied by the number of magnets employed on the brake system.

5.3 Plumbing

5.3.1 Water Distribution System

- Except for gravity-type distribution systems, all water piping in the water distribution system is subjected to a pressure test before any portion is covered or concealed.
- The test is to be done by subjecting the system to air or water at 551 kPa to 690 kPa (80 psi to 100 psi) for 10 min without leakage or loss of pressure.
- An adequate and accurate pressure gauge is used on all tests.
- Vehicles with demand systems that do not have city water connections is to be tested by subjecting the system to air or water pressure equivalent to the maximum discharge pressure of the pump for a period of 10 min without leakage or loss of pressure.
- Failure of the system when subjected to air pressure shall not necessarily be considered a failure, unless the system also fails when subjected to water pressure.

NOTE: *It is recommended that the water pressure test be used for all units using storage-tank-type water heaters in the water system. If the air test is used, it is recommended that the water heater tank be bypassed or disconnected from the water supply system during the test.*

- PVC and CPVC system is to be tested to the manufacturer's recommended test procedure.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

5.3.2 Drainage and Vent System and Plumbing Fixtures

The waste and vent system is subjected to one of two tests described below:

a) Before plumbing fixtures are connected, all the openings into the piping shall be plugged and the entire piping system subject to a static water test for 15 min by filling it with water to the top of the highest vent opening.

b) After all other fixtures have been installed, the seal traps filled with water, and the remaining openings securely plugged, the entire system shall be subjected to a 2 in (51 mm manometer) water column air pressure test.

Note: *Traps should be cleared of water after testing.*

The body waste holding systems is subjected to a static water test for 15 min by filling the system with water to a level above the connection to the toilet to the toilet flange without evidence of leaks.

The liquid waste holding system is subjected to a static water test for 15 min by filling the system with water to the level of lowest connected trap without evidence of leaks.

5.3.3 Shower Stalls

- All shower stalls are filled with water to the top of the dam.
- They are inspected after 10 min to check for leaks.

5.3.4 Fixture Test

- The plumbing fixtures and connections are subjected to a flow test by filling them with water and checking for leaks and retarded flow while they are being emptied.

5.4 Propane

Prior to leak testing, all appliances must be installed and connected to the complete gas piping system.

5.4.1 Leak Testing of Piping, Tubing, and Hose Systems

5.4.1.1 Before Appliance Connection:

- Before the test is started, the temperature of the piping is allowed to equalize with the surrounding air temperature, so that they are the same.
- During the test, the temperature of the piping and air remains uniform.
- One of the following test methods is used:

    1. Manometer
        a. The piping system is pressurized with air to a pressure of 20.7 kPa (3psi, 150 mm Hg, 6 in Hg).
        b. The source of air pressure is shut off.
        c. The air pressure in the system is measured for 10 min with a mercury manometer, slope gauge, or equivalent device calibrated in increments of not greater than 0.7kPa (0.1 psi).
        d. If a drop in pressure is observed over the 10 minute period, the system is checked for leaks, any leaks are repaired, and the test procedure is repeated.

    2. Bubble-Type Leak Detector
        a. The piping system is pressurized with air to a pressure of 20.7 kPa (3psi, 150mm Hg, 6 in Hg).

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

b. A bubble-type leak detector is installed between the source of air pressure and the piping system. The detector is observed for 1 minute.
c. Where the detector indicates airflow during the 1 minute period, the system is checked for leaks, any leaks are repaired, and the test procedure is repeated.

- Where leaks are detected, they are repaired and the test procedure is repeated to ensure that there are no additional leaks.
- Where defective materials are found, they are replaced.

5.4.1.2 After Appliance Connection

- Before the test is started, the temperature of the piping is allowed to equalize with the surrounding air temperature, so that they are the same.
- During the test, the temperature of the piping and air remains uniform.
- One of the following test methods is used:

1. Manometer
   a. The piping system is pressurized with air to a pressure between 2.5 and 3.5 kPa (0.36 and 0.5 psi) or 250 and 356 mm (10 and 14 in) of H_2O column.
   b. The source of air pressure is shut off.
   c. The test gauge is installed downstream of the appliance regulator.
   d. A valve is opened and the pressure is reduced to 1.99 ± 0.5 kPa (0.29 ± 0.07 psi) or 200 ± 12 mm (8 ± 0.5 in) of H_2O column.
   e. The air pressure in the system is measured for 3 min with a manometer or pressure-sensing device.
   f. If a drop in pressure is observed over the 3 minute period, the system is checked for leaks, any leaks are repaired, and the test procedure is repeated.

2. Bubble-Type Leak Detector
   a. The piping system is pressurized with air to a pressure between 2.5 and 3.5 kPa (0.36 and 0.5 psi) or 250 and 356 mm (10 and 14 in) of H_2O column.
   b. A bubble-type leak detector is installed between the source of air pressure and the piping system.
   c. A valve is opened and the pressure is reduced to 1.99 ± 0.5 kPa (0.29 ± 0.07 psi) or 200 ± 12 mm (8 ± 0.5 in) of H_2O column.
   a. The detector is observed for 1 minute.
   d. Where the detector indicates airflow during the 1 minute period, the system is checked for leaks, any leaks are repaired, and the test procedure is repeated.

3. Alternate
   a. Appliance connections shall be tested for leakage with soapy water or bubble solution.
   b. Where leaks are located, they shall be repaired, and the connection is retested.
   c.
   d. Where leaks are detected, they are repaired and the test procedure is repeated to ensure that there are no additional leaks.
   e. Where defective materials are found, they are replaced.

5.4.1.3 Locating Leaks:

- An approved liquid leak detector solution or device is used;
- Products containing ammonia or chlorine are not used;
- Matches, candles, flame, or other sources of ignition are not used;

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

- Artificial illumination is restricted to battery operated handheld flashlights of the safety type or certified explosion proof equipment; and
- Electric switches in or adjacent to the area of leakage are not operated, unless of the type designed for hazardous locations.

5.5 Electrical

The following tests are conducted.

5.5.1 Continuity

All lighting and all receptacle circuits, including grounding circuits, are to be tested for continuity.

5.5.2 Dielectric Strength

Recreational vehicles built with either a 120 V or a 120/240 V electrical system are to be capable of withstanding, without electrical breakdown, either:

a) the application for a period of 1 min of an AC voltage of 900 V dielectric strength test; or
b) the application for a period of 1 sec of an AC voltage of 1080 V dielectric strength test;

- The dielectric strength test may be conducted by applying a DC voltage instead of an AC voltage, provided that the voltage used is 1.414 times the values specified (i.e. 1273 VDC for 1 min or 1527 VDC for 1 sec).
- The voltage shall be applied between the grounded and ungrounded conductors and non-current carrying metal parts of the recreational vehicle. Fixtures and permanently installed appliances are not required to withstand the test.
- The test is performed after branch circuits are complete prior to energizing the system and again after all outer coverings and cabinetry have been secured in place.
- During the tests, all switches and other controls are in the ON position.
- Precautions are taken when performing the tests to ensure that voltage-sensitive devices such as ground fault circuit interrupters are not subjected to voltages that will damage the devices.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

6 DESCRIPTION:

Refer to the attached figures for a description of individual models.

Refer to the Material List for a list of the critical components acceptable for installation in the indicated models. Equivalent components may be substituted at the discretion of QAI. All components are installed in accordance with the terms of their listing.

6.1 Exclusions

The following items have not been reviewed as part of this evaluation and are not included as features of the models listed in this report:

Safety glazing material is not used.
Outlet boxes do not contain conductors of more than one voltage.
Hydraulic brakes are not used.
Furnaces with height exceeding 915mm are not used.
Fixed electric space heating equipment is not used.
Folding tent campers

6.2 General Safety Requirements:

6.2.1 Emergency Exits:

Each recreational vehicle has a minimum of two means of exit remote from each other that provide unobstructed passage to the outside of the vehicle. The alternate exit is located in the roof or on a wall other than that in which the main vehicle exit door is located. The latch mechanism of any exit facility is operable by hand. When the alternate exit is through the roof, a ladder is provided at the rear of the vehicle in order to climb to the ground. An alternate exit through the wall of a recreational vehicle provides space for an ellipsoid having a minor diameter of 432mm and a major diameter of 610mm (24” x 17”) to exit through the opening.

6.2.2 Steps:

Where steps are installed at exits, they have a minimum tread depth of 200mm and the top step protrudes a minimum of 200mm from the side of the vehicle.

6.2.3 Fire Extinguisher:

Every recreational vehicle is equipped with a portable fire extinguisher. The fire extinguisher is located in the interior within 600 mm (24 in) of the opening of the primary exit in a readily accessible position. The fire extinguisher is rated 10B:C or 5B:C and conforms to the CAN/ULC Standard S504 or UL299.

6.2.4 Detectors:

Every recreational vehicle is equipped with a smoke detector. The smoke detector is installed in accordance with its listing within the living space or cooking area of the vehicle. A propane detector listed to UL standard 1484 standard is installed in accordance with the terms of its listing in all vehicles equipped with a propane gas appliance, typically located in the cooking area close to the floor. A carbon monoxide detector listed to CSA standard 6.19 is installed in accordance with the terms of its listing in all recreational vehicles.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

6.2.5 Cargo Transportation Space:

The following applies to recreational vehicles intended to transport or store vehicles powered by an internal combustion engine.

6.2.5.1 General:

Where intended to provide transportation or storage of vehicles powered by an internal combustion engine, the RV is constructed with a non-absorbent floor that is resistant to exposure to fuels and motor oil. Seamless flooring is installed over the entire floor area of the cargo space and turned up and sealed to the wall with a fuel resistant adhesive. The exterior entrance door to the cargo area is wider than 914 mm and is equipped with an access ramp.

6.2.5.2 Propane Appliances:

All propane appliances containing a pilot light are equipped with a pilot light shut-off.

6.2.5.3 Separation Wall:

Where a recreational vehicle includes a separation wall and opening in the floor of the cargo area, sleeping facilities are not provided in the cargo area.

6.2.5.4 Venting:

Where venting is provided by windows, at least one vent is located on either side of the vehicles longitudinal center line. Windows have a minimum vent area of 0.13 m^2 and are able to remain open during transit and in any setup mode. The top of sidewall and endwall openings are not more than 457 mm (18 in) above the vehicles interior floor level. Where venting is provided by passive ram air, vents provide 65 cm^2 (10 in^2) of free openable area in the forward upper end and lower end of the cargo area and point forward and after respectively.

6.2.5.5 Fire Extinguisher:

The cargo area is equipped with a portable fire extinguisher located in the interior in a readily accessible position within 600 mm (24 in) of the door that serves the cargo area. The fire extinguisher is rated 10B:C and conforms to the CAN/ULC Standard S504 or UL299.

6.2.6 Fuel systems:

The following applies to recreational vehicles including fuel system components. This does not apply to the vehicular components of the fuel systems of Motor Homes.

6.2.6.1 General:

The entire fuel system must be liquid tight and vapour tight to the interior of the vehicle.
Fuel system components are accessible from the outside of the vehicle only, and are protected from road impact damage.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

6.2.6.2 Fuel Tanks:

6.2.6.2.1 General:

Metallic fuel tanks are bonded to the vehicle chassis as per the manufacturer's instructions. Fuel tanks for fuel dispensing system have a means of venting while fuel is being dispensed.

6.2.6.2.2 Installation:

Fuel tanks are located under the floor, in a compartment, on a trailer frame, or for fifth wheel trailers, forward of the front bulkhead below the overhang. Fuel tanks and attachments are located within the rear and front clearance lines of the vehicle. Where the tank is installed between the main rails, the tank does not extend below the main rails.

6.2.6.2.3 Compartment Installation:

Compartments with fuel tanks having a filler opening or vent do not have floors. Compartments are vapour resistant to the interior and sealed to prevent transmission of vapours to the interior. Compartments do not include flame or spark producing equipment. Electrical equipment in compartments is certified for use in Class 1, Zone 2 (or Division 2), Group IIA (Group D) hazardous locations.

6.2.6.2.4 A Frame Installation:

Fuel tanks installed on the A-Frame do not extend below the bottom of the A-frame members. Where the fuel tank is located between the chassis main rails, the rear point is permitted to be taken at the bottom of the rear rail.

6.2.6.2.5 Securement:

The is secured by fastenings that preventing any movement when a force equal eight times the max capacity of the tank applied through the filled fuel tank's center of gravity.

6.2.6.2.6 Fuel Withdrawal:

Fittings for fuel withdrawal from the tank are located above the level of fuel in the tank when the tank is full.

6.2.6.3 Fill System:

The filler cab end is located completely above the fuel tank. The area surrounding fuel filler pipes and vents is sealed to prevent vapours from migrating to the interior of the recreational vehicle. The sidewall surface below and extending at least 304.8 mm (12in) to each side of the cap's vertical centerline is constructed of fuel resistant non-absorbent materials. Low voltage electrical equipment installed within 1.5 m of the filler opening or tank vent is certified for use in Class I, Zone 1(or Division 1), Group IIA (Group D) hazardous locations.

6.2.6.3.1 Separation from Combustion Air Inlets:

Filler spouts are separated from propane appliance combustion air inlets by a distance of at least 915 m (36in) if the inlet is located above or at the same level. Where the appliance inlet is below the filler spout, the minimum distance is increased by the vertical distance below the spout.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

6.2.6.4 Fuel Distribution System:

6.2.6.4.1 General:

Fuel distribution equipment is protected from road impact damage by containing equipment within vehicle clearance lines. Electrical equipment that forms a part of the distribution system or that are within 1.5 m (5ft) of a fuel distribution connection are certified for use in Class I, Zone 2 (or Division 2), Group IIA (Group D) hazardous locations. Electrical wires that are not part of the fuel distribution system do not contact the fuel distribution system. Joints and Tanks are located so that any possible leakage will not come into contact with electrical or exhaust system components.

6.2.6.5 Support:

The fuel distribution system support mechanism minimizes chafing and maintains at least 152.4 mm (6in) clearance from any unshielded exhaust system component.

6.2.6.6 Fuel–dispensing systems:

6.2.6.6.1 General:

Fuel dispensing equipment is protected from road impact damage by containing equipment within vehicle clearance lines. Electrical equipment forming a part of the fuel dispensing system or equipment that is less than .9 m (3ft) from the outlet of the distribution hose is certified for use in Class 1, Zone 2 (Division 2), Group IIA (Group D) hazardous locations. Fuel dispensing equipment is only accessible from the exterior of the vehicle. Systems are equipped to prevent unauthorized use.

6.2.6.6.2 Shutoff:

The fuel dispensing system is provided with either a readily accessible exterior emergency manual shut-off located not more than 457 mm (18 in) in from the vehicle's outside wall or a remotely controlled, normally closed electronic shut off valve whose control is located not more than 457 mm (18 in) in from the vehicle's outside wall.

6.2.6.6.3 Compartments:

Compartments housing fuel dispensing equipment are made of non-porous and non-combustible materials, sealed from the interior of the recreational vehicle, and ventilated by openings at 1100 mm^2 (1.7 in^2) within 51 mm (2 in) of both the top and bottom of the compartment. Compartments do not house flame or spark producing equipment.

6.2.6.6.4 Nozzles:

Nozzles are of the trigger and handle type, are non-ferrous, and have a maximum fuel hose length of 1.5 m (5 ft) from the exterior of the vehicle. The system is designed to prevent siphoning caused by hose failure.

6.2.6.6.5 Separation from appliance vents:

Vents are not located within 0.9 m (3 ft) from any point that the fuel dispensing nozzle can reach.

6.2.6.6.6 Bonding Wire:

Fuel dispensing systems are equipped with a minimum 14AWG bonding wire. The wire is at least 0.9 m (3 ft) longer than the maximum reach of the fueling hose, has one end attached to the recreational vehicle frame, and the other end attached to a spring-loaded metal connector for attachment to the vehicle.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

6.2.6.6.7 Fuel Filters:

Where used, inline fuel filters are located in a readily accessible location and mounted so that removal does not allow fuel to drip onto electrical or exhaust system.

6.3 Vehicular Requirements:

6.3.1 Couplings:

Ball couplings are rated in sizes corresponding to the maximum gross vehicle weight for which they are used and conform to the requirements of SAE Standard J684. Couplings are mounted to the attaching member by welding in such a manner that the minimum breaking load in the coupling is safely transferred to that member. A thumb latch is used to prevent disengagement of the coupling while in operation.

6.3.2 Fifth Wheel Couplings:

Kingpin couplings are dimensioned as per SAE Standard J700 and permanently attached by welding. The locking or securing jaw-portion is not supplied. The assembly as a whole shall comply with SAE Standard J2638-03.

6.3.3 Tongue/A-Frame:

The distance from the center line of the coupling ball-socket to the vertical plane of the foremost part of the trailer is not less than 900mm. The shortest tongue or A-frame length is such that a 1200mm rod pivoted horizontally about the center of the coupling is capable of making an angle of 41 degrees or less with the centerline of the unit before coming in contact with any part on the front of the unit. The vertical tongue load (other than fifth wheel) is at least 10 % and not more than 15% of the trailer weight for any normal loading condition of the trailer.

6.3.4 Safety Chains:

Each trailer (other than fifth wheel) is equipped with welded steel safety chains for attachment to the towing vehicle. The chain is capable of attaching to two points on the towing vehicle and provisions are made to prevent disengagement while the trailer is being towed. The chain is connected to the A-frame or draw bar in a manner that does not allow tension to be placed directly on the means of attachment. The attachment means for safety chains are rated at least equivalent to the chains. Chains are never welded. Safety chains comply with the strength requirement of Table 4 of SAE Standard J684 and are color coded as follows:

Hitch Class 1 – Silver
Hitch Class 2 – Brass
Hitch Class 3 – Black
Hitch Class 4 – Permanently labeled to indicate proof of load rating on each cable and at least one link per length of chain attached to the recreational vehicle.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

6.3.5 Safety Glazing Material:

a) All safety glazing material conforms to the ANSI Z26.1 standard
b) All safety glazing materials are marked plainly visible with the manufacturer's identification and the "AS" designation with the appropriate requirements of ANSI/SAE Standard Z26.1

6.3.6 Vehicular Wiring – Brakes (not applicable to motor homes):

Electric brakes are rated at 3 amps each, 12V DC. Service brakes are arranged symmetrically on each axle of the trailer. All models include a breakaway device. A 12V automotive battery is used for automatic actuation, capable of delivering 6A hours per axle if it is a braked axle with 4L magnets. Brakes are wired in accordance with schematic B of figure 3 of the Z240.1.2 standard. Minimum wiring gauges for braked axles are in accordance with the following table.

Table 1: Brake Axle Minimum Wire Gauges

NUMBER OF AXLES	HITCH TO AXLE DISTANCE (FEET)	MINIMUM WIRE GAUGE
1	Any	16 AWG
2	Under 30	12 AWG
2	Over 30	10 AWG
3	Under 30	10 AWG
3	Over 30	8 AWG

Note: *Table is in accordance with the manufacturer's installation instructions.*

6.3.7 Vehicular Wiring: Wiring is provided and in accordance with the following coloring code:

White – Ground
Blue – Electric brakes
Green – Tail and running lamps
Yellow – Backup Lights or Auxiliary Use.
Black – Charging circuit, or auxiliary or stop lamps
Brown – Right turn signal and stop lamp
Red – Left turn signal and stop lamp

6.3.8 Trailer Capacity:

Refer to the attached axle loading chart.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

6.4 Plumbing Requirements:

6.4.1 General:

- Drainage and vent pipe is not drilled or tapped.
- Water is not obstructed or retarded by fittings or connection devices.
- Imperfections in materials are not concealed.
- Piping and fixtures do not interfere with normal operation and use of windows, doors and other facilities.
- Galvanized pipe is not used in the water distribution system.
- All exterior openings around piping are closed to prevent the entry of rodents.
- All piping system closures are gas and watertight.
- Any metal part of the plumbing system exposed to weather, water, and mud or road hazards is painted and protected from damage.
- No part of the water supply system is connected to the drainage or venting system.
- An adequate quantity of running water is supplied to each plumbing fixture.
- Pressure and gravity type water tanks are not used.

6.4.2 Fixtures:

Plumbing fixtures are installed in a location that provides access for cleaning and repair and are set level and in alignment with adjacent walls. Wall hung fixtures are rigidly attached to walls by means of metal brackets or the fixture is screwed directly to the wall. Piping from each fixture extends to the nearest wall. Outlets of faucets are spaced at least 25 mm above the flood level of the fixture.

6.4.3 Water Closets:

Water closets are rigidly bolted to the closet flange. Each toilet is fitted with a brass or plastic floor flange adapter ring securely screwed to the drain piping or waste holding tank. The floor under the water closet and 150mm around the fixture is resistant to moisture. Hardware used to mount the water closet is resistant to rust.

6.4.4 Showers:

Shower walls are made of smooth, corrosion resistant, non-absorbent waterproof material, minimum 6’ high or to the ceiling, extending to a height at least 150mm below the shower head. Hinged shower doors open outward. Flexible shower supply fixtures are restricted from coming within 150mm of non-potable water.

6.4.5 Joints:

All plumbing joints are connected and assembled to correct tightness. Pipe threads are properly engaged with the threads of the fitting. Plastic pipe is inserted to the full depth of the solder cup of the fitting. Plastic DWV pipe and fittings are joined in accordance with the CSA B181 series of standards. Copper tubing is not used in water distribution system. Steel pipe is not used in the water distribution system. Solder joints are not used.

6.4.6 Traps:

Each plumbing fixture is appropriately trapped. Trap centers are as close to the fixture waste pipe as possible, with a maximum distance of 925mm (600mm for lavatories) measured along the pipe. Each trap has a water seal between 50mm and 100mm and is set true to the seal. Traps are no less than NPS 1 ¼” when connected to a single fixture having no more than a NPS 2 drain opening. No trap is larger than the waste pipe to which it is connected. The fixture drain between a trap and the tee or vented waste line is graded 1 in 50. The vent opening at fixture tees is not below the invert of the trap outlet. The waste pipe between the trap and vented line may change direction not exceeding 180 degrees and is between two pipe diameters and 1.5 meters in length.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

6.4.7 Cleanouts:

Cleanouts are installed if the drainage system cannot be cleaned through fixtures or roof openings. All cleanouts are accessible through an unobstructed minimum clearance of 150mm in front of the opening.

6.4.8 Road Damage:

No part of the plumbing system extends or protrudes from the vehicle in any way that would cause it to be damaged during transit. Drain terminations and other plumbing components protruding below the plane formed by the rear axle to road interface and the rear bumper and frame is protected from contact with the road.

6.4.9 Piping:

6.4.9.1 Support:

Piping is secured at close enough intervals to prevent rattling, carry the weight of the pipe and its contents, and allow for expansion and contraction of the system.

6.4.9.2 Valves:

Water valves are the same nominal size as the piping to which they are connected.

6.4.9.3 Water Connections:

Each water distribution system is equipped with a NPS ¾" swivel female hose inlet coupling or a NPS ½" or larger pipe connection. The inlet connection has a matching cap to seal the water inlet and is permanently attached to the vehicle.

6.4.9.4 Slide out Sections:

Water supply tubing and fittings that connect the main vehicle to slide-out sections are protected from damage, excessive movement and vibration in any normal operating condition. Drainpipe connections between the slide-out sections and the main section of the RV are protected so there is no likelihood of damage to the interconnection means. The minimum slope towards the drain outlet is maintained (graded 1 in 100) at any position of the slide-out section.

6.4.9.5 Water Heaters:

Water heaters include a pressure relief valve and temperature limiting device. Relief valves are connected to a drainpipe not smaller than the relief valve diameter and extend outside the vehicle, terminating downward in a location protected from dirt and mud.

6.4.9.6 Drains:

Drain outlets are located on the left side of the vehicle within 6.9 m (22.5 feet) of the rear or across the back of the unit between the centerline and the left side wall and located not more than 450mm from the exterior face of the wall. Drain outlets have a minimum clearance of 35mm on at least three sides and are arranged for hose coupling devices of the manual disconnect type. Drain outlets are equipped with a manual disconnect watertight cap that is permanently attached to the vehicle.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

6.4.9.7 Drain Slope:

Horizontal drainage piping has a uniform slope of not less than 1 in 100 toward the drain outlet.

6.4.9.8 Anti-siphon trap vents:

Anti-siphon trap vents are installed in a location that permits a free flow of air, is accessible to inspection, maintenance and replacement and the sealing function is at least 150mm above the top of the trap arm.

6.4.10 Holding Tanks:

6.4.10.1 Liquid Waste Holding Tanks:

Tanks are vented at the highest point with a minimum of a 1-1/4” NPS vent pipe extending to the roof; or a continuous vent serving as a drain for several fixtures. The drain outlet is a NPS 1-1/2 minimum, located at the lowest point in the tank and is fitted with a termination valve.

6.4.10.2 Body Waste Holding Tanks:

Tanks are vented at the highest point with a minimum of a 1-1/4” NPS vent pipe extending to the roof; or a continuous vent serving as a drain for several fixtures. The drain outlet is a NPS 3 minimum located at the lowest point in the tank and is fitted with a fullway valve.

6.4.10.3 Vents:

Each dry or went vent extends from the fixtures point of connection with the waste piping to a point not less than 150mm above the flood level of the fixture before connecting to other vent pipe. Vents for horizontal drain sections connect above the center line of the drain piping downstream of the trap. All vents drain back to the drainage system by gravity. Dry vent pipes extend through the roof flashing and terminate vertically no less than 50mm above the roof and not less than 915mm away from any motor-driven air intake that opens into habitable areas. A hood on the vent pipe provides exposure equal to at least the cross-section area of the vent pipe. If a vent cap is provided, it is removable without removing the flashing from the roof.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

6.5 Propane Installation:

6.5.1 General:

- Appliances are secured to prevent displacement and movement from vibration and road shock in accordance with the manufacturer's instructions.
- Appliances are accessible for cleaning, inspection, repair, adjustment and replacement of accessories without the removal of any permanent construction of the vehicle.
- Appliance manuals and instructions are included with the RV.
- Gas fired appliances (excluding cooking ranges and interior lights) are of the direct vent type, or provide an equivalent complete separation of the combustion system from the atmosphere of the living space.
- Doors, drapes and other material are located so that they cannot be placed or swung closer to the appliance than the clearance specified on the appliance.
- Defective material is disposed.
- Piping and fittings are clear from cutting burs and defects.
- The supply inlet is capped at each stage of manufacturing and at the completion of manufacture to exclude entry of foreign matter.

6.5.2 Clearance:

Clearances between appliances and combustible material are not less than specified by the manufacturer in accordance with their listing. The clearance space is guarded or framed to prevent use of the space for storage by the owner. This requirement applies to the front enclosure if the clearance specified is 50mm or less. Ranges have a vertical clearance between the cooking top and combustible material and cabinets in accordance with Table 1 of Z240.4.2 or in accordance with the terms of its listing.

6.5.3 Fresh Air Vents:

Fresh air supplied to the interior for combustion is made by providing 1100 mm^2 of free air for every kilowatt of input to appliances not provided with complete separation of the combustion system (100,000 Btu/hr requires approximately 50 in^2 of air space). Air inlet openings are provided by windows or roof top ventilators.

6.5.4 Combustion Air Inlets:

Any portion of a combustion air inlet of a propane appliance is located at least 915mm away from any gasoline filler spout if the inlet is located above or at the same level as the spout. If the inlet is located below the spout, the distance is the sum of the vertical distance below the spout and 915mm.

6.5.5 Combustion Air Outlets:

Vents or exhausts of propane appliances do not terminate underneath the unit and are not obstructed by the opening of doors. Every joint or connection of the vent system is secured, rigid, tight and acceptable quality of work.

6.5.6 Flue Gas Vents:

Flue gas vents terminate in a location where flue gases cannot circulate into the air inlets of other appliances. Flue vents are installed complete and do not require field extension. No openings occur within 230mm of the edge of the flue terminal. Any motorized air intake is located at least 900 mm away from any flue gas outlet.

6.5.7 Exhaust Vents for Cooking:

Mechanical exhaust vents are located above cooking ranges with a minimum opening of 8065 mm^2 (12.5 in^2) and

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

not more than 3.1m from the vertical front of the appliance. All ducts extend through the wall or roof to the exterior. Range hood ducts are made of noncombustible material, extend through the roof, and preclude the trapping of combustion products.

6.5.8 Propane Cylinder Location:

Cylinder installation within a vehicle is vapor tight to the inside of the vehicle, readily accessible only from the outside, and vented to the outside by a minimum of 1935 mm^2 (3 in^2) free vent area at the bottom of the enclosure at least 1m horizontally from an opening into the vehicle, fuel appliance intake and exhaust vents, and internal combustion engine exhaust terminations if below the level of the vent.

6.5.9 Propane Cylinder Mounting:

Cylinders are supplied with the RV and secured by brackets designed and fabricated to withstand loading in any direction at least eight times the mass of a filled propane cylinder. Cylinders on travel trailers that are located on the A-frame are to be arranged so that safety relief devices will discharge away from the vehicle at not less than 1m horizontally from any opening into the vehicle or from the air intake of an appliance if either are below the level of such discharge.

6.5.10 Regulator Mounting:

Bleed vents incorporated into regulating equipment are directed downward 45° or more from the horizontal. When cylinders are mounted on the A-frame or at the rear of the RV, a rigid support bracket is provided for mounting the regulator and is also enclosed within a plastic or metal hood.

6.5.11 Regulator Piping Connections:

Flexible hose connectors are used between the cylinder service valves and the regulator inlet, and between the regulator outlet and the main propane piping or tubing.

6.5.12 Propane Cylinders:

Each cylinder has an excess flow valve with maximum flow rate less than 2.83 m^3/hr (200 ft^3/hr) at 688 kPa (100 psi). Propane cylinders are installed with an approved overfill prevention device and are marked with a Canadian Registration Number (CRN or TC).

6.5.13 Piping:

Propane vapor phase piping with operating pressures less than 860 kPa (125 psi) is Schedule 40. Propane vapor phase piping with operating pressures equal to or greater than 860 kPa (125 psi) is Schedule 80. Fittings are malleable iron or steel conforming to ANSI B16.3. Pipe and fittings are new. Joints are welded or threaded. Threads are tapered and conform to Table 2 of the Z240.4.2 and ANSI/ASME B1.20.1.

6.5.14 Gaskets:

Where used, gasket material is neoprene, nitrile or inert material resistant to propane. Natural rubber is not used.

6.5.15 Tubing:

Tubing is new, seamless copper. Tubing fittings are rated for working pressures not less than the operating pressure. Flare nuts are stress relieved or forged. Joints on tubing are made by means of flare joints.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

6.5.16 Installation and Routing:

Piping and tubing pass through floors, ceilings or walls at 90 degrees to the surface of the assembly. Piping is shielded by a vehicle frame member or a non-combustible baffle when it is located within 115 mm of an exhaust system, transmission or heat component of the vehicle engine. Where tubing passes directly through floors, ceilings or walls it is protected by a rubber or plastic grommet with snug fit that extends completely through the member. Joints are not located in floors, walls, partitions or other unvented spaces. Branch outlets are connected to supply piping in an area vented to the outside and vapor tight to the inside. No joints are made within the living space of the vehicle except at the connection to the appliance. Individual shut off valves in the piping or tubing to gas appliances are not used unless certified as part of the appliance.

6.5.17 Piping Support:

Piping is supported by galvanized or equivalent metal straps at intervals less than 1220 mm (48 in) and anchored within 150 mm (6 in) of each end of the main gas line. All joints in pipe runs are supported within 300 mm of the joint. Piping or tubing is protected from road hazard and damage by strapping directly to the chassis.

6.5.18 Piping Protection:

Where tubing passes through walls, floors, ceilings, and partitions, it is protected by grommets that fit snugly in both the line and the hole and extend completely through the opening.

6.5.19 Capping:

The supply inlet shall be capped or plugged at the completion of manufacture of the vehicle to prevent entry of foreign matter.

6.5.20 Ranges that fold down for transit:

A flexible hose connector conforming to CAN/CGA 8.1 or 8.3 with minimum internal diameter of 6.4 mm (1/4 in) and rated at 2410 kPa (350 psi) is used to provide flexibility. The flexible hose connector is not located in the range burner box, only acceptable tubing is located in this area. Connections between this tubing and the flexible hose are made as close to the burner box as possible. Connection to the gas supply system is made on the interior as close as possible to the point where the gas supply line passes through the floor. Flexible hose connectors are not routed through the floor. Flexible connector lengths are kept to a minimum to obtain the required flexibility and are located so they are not susceptible to damage. The gas supply line is firmly fastened and protected from damage.

6.5.21 Ranges that relocate for use on the exterior of the vehicle:

A Flexible hose connector conforming to CAN/CGA 8.1 or 8.3 with minimum internal diameter of 6.4 mm (1/4 in) and rated at 2410 kPa (350 psi) is used to provide flexibility. The flexible hose connector is not located in the range burner box, only acceptable tubing is located in this area. The flexible hose is not routed through the floor of the vehicle. Quick disconnect fittings conform to CGA Standard 6.9. A gas shut off valve conforming to CGA 3.16 or 9.2 is installed upstream of the quick-disconnect fitting. The valve is mounted to the line that passes through the floor in an area that is vapor tight to the interior and vented to the exterior by an opening of at least 1290 mm^2 (2 in^2) located at the bottom of the compartment. The system is marked in accordance with the marking section.

6.5.22 Slide-Out Sections:

A Flexible hose connector conforming to CAN/CGA 8.1 or 8.3 with minimum internal diameter equal to that provided by the copper tubing and rated at 2410 kPa (350 psi) is used to provide flexibility. The flexible connector is installed and supported with straps to ensure it is protected from damage during slide-out operations. The flexible connector is not located within the range burner box and is protected by a grommet where it passes through a wall or floor. End joints are accessible for maintenance and firmly secured to avoid damage. Flexible

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

connectors are kept to a minimum length to provide flexibility. No bend occurs in the hose with a radius less than 100mm.

6.5.23 Air Ducts:

Ducts are Class 1 air ducts conforming to ULC Standard S110 or are constructed from sheet metal are in accordance with Table 7 of the Z240.4.2. Slip joints are lapped at least 25 mm and are individually fastened. Approved duct tape is used to seal mechanically secured joints. Ducts are securely supported. Provision for return air is provided in all rooms and living spaces (except toilet areas) totaling 4400 mm^2 for each kilowatt of input rating (6.82 in^2 for every 3414.4 BTU). Dampers are not used.

6.6 Electrical Requirements:

6.6.1 Low Voltage:

6.6.1.1 General:

Equipment is secured to prevent damage during transit.
Solderless connections made with caps that can be removed without tools are secured with tape.
Strain relief is provided for all wiring.

6.6.1.2 Power Supply Cord:

The power supply location is shown on the floor plan and marked on the exterior of the trailer with a permanently attached label. Each shall have a power supply cord as follows:

30A units must
- be equipped with 10AWG that are of type STW, SOW or equivalent.
- use 3wire, 120 VAC with molded 2 pole, 3 wire grounded type plug (X-30P, orientated so the grounding member is farthest form the point of cord entry).

50A units must
- be equipped with 6AWG that are of type STW, SOW or equivalent.
- use 4wire, 120 VAC with molded 3 pole, 4 wire grounded type plug (14-50P, orientated so the grounding member is farthest form the point of cord entry)

The power supply cord, min 7m (23ft) in length, enters the vehicle on the left side within 4.6m (15ft) of the rear, at the rear towards the left of the vehicle, or if on the left side greater than 4.6m from the rear, the power supply cord is lengthened accordingly. Where the power supply cord passes through a wall, a bushing is securely installed in place with a smooth rounded surface. Space is provided within the recreational vehicle for storing the cord when it is not in use.

6.6.1.3 Distribution panel:

Dead front circuit-breaker type with door, have a main disconnecting means rated not higher than the power supply assembly rating, is placed in a readily accessible location, in a location or compartment protected from condensation or direct contact with fluids, or in a separate and readily accessible compartment when installed in a clothes closet. A panel board, when placed in a bathroom, is greater than 1 m from a shower enclosure or is placed in a toilet room without a shower.

6.6.1.4 Wiring:

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

Non-metallic sheathed cable (copper) rated 90C min is used for branch circuits. 14AWG is used for circuits with 15A over-current protection; 12AWG is used for branch circuits with 20A over-current protection.

6.6.1.5 Identified Conductor:

The identified conductor is white. Single-pole switches and over-current devices are not connected in the circuit of the identified conductor.

6.6.1.6 Outlet Boxes:

Boxes are enclosures for wire connections are accessible. Outlet boxes are mechanically secured to a structural unit of the trailer. Unused opening in boxes are closed with plugs or plates that provide protection equivalent to the wall of the enclosure. Outlet boxes are installed at all points of the outlet, switch, or junction.

6.6.1.7 Support:

Wires run between outlets are supported by straps or equivalent located within 300mm of every box or fitting at intervals not more than 1.5m. Non-metallic sheathed cable is secured to outlet boxes using approved strain relief connectors. An air space of at least 25 mm or an acceptable thermal barrier is applied where cable is run in proximity to heating ducts or piping. Wires not connected to a load are capped in an outlet box.

6.6.1.8 Protection:

Where non-metallic sheathed cable is run through studs or joists, the outer surface of the cable is at least 32 mm from the edge of the wooden member.

6.6.1.9 Lighting:

Boxes used with lighting equipment are covered for protection with a listed lighting component. Where any part of a combustible wall or ceiling is exposed between the edge of a fixture canopy and an outlet box, that part of the wall or ceiling is covered with noncombustible material. Screw-shells of lamp holders are connected to the identified conductors.

6.6.1.10 Bathrooms:

Lights over bathtubs or showers are totally enclosed, gasketed and suitable for use in wet locations. Switches are located more than 1.2m horizontally from the vertical plane of the nearest bathtub or shower. Receptacles are located as far a practicable from the bathtub or shower and are Class A GFCI.

6.6.1.11 Swing out Sections:

A hard-usage, outdoor, flexible cord or power supply cable is used to connect sliding sections of the vehicle with the main section and is protected so there is no likelihood of damage when the section is extended, retracted or in transit. The flexible cord and associated connectors have an electrical rating suitable for the maximum connected load and are protected from weather. Exposed non-current carrying metal parts of sliding sections are reliably bonded to non-current carrying metal parts of the main section.

6.6.1.12 Sharp Edges and Conductors:

Surfaces in which conductors are in direct contact with are free from sharp edges or burrs that may cause abrasion of the insulation of the conductors.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

6.6.1.13 Conductor Insulation Rating:

Conductors do not have an insulation rating less than 90°C.

6.6.1.14 Separation of cable from Heat Ducts:

Heat transfer from a heat duct to a non-metallic sheathed cable is minimized by providing a minimum of 25mm of air space. An installation of a thermal barrier between the cable and heat duct is also acceptable.

6.6.1.15 Branch Circuits:

General purpose branch circuits are protected by over-current devices rated at not more than 15A. There are never more than 12 outlets on any 2-wire general purpose branch circuit. Every kitchen or dining area countertop of 305mm x 305mm or larger has an outlet serving the working surface located adjacent to it.

6.6.1.16 Individual Branch Circuits:

Individual branch circuits protected by overcurrent devices rated at not more than 15A and supplying permanently connected appliances may have additional outlets but not receptacles provided these outlets are for fans, stationary lighting fixtures or similar permanently connected appliances. In no case does the load exceed 80% of the rating of the overcurrent device protecting the appliance or 1500W for a circuit supplying an electric water heater. Electrical heating and cooking appliances rated at more than 1500W are located on individual branch circuits. If more than one appliance of this type is connected to a branch circuit, a multiple throw manual switch is used so only one appliance is energized at a time.

6.6.1.17 Receptacles:

Receptacles are of the grounding type and are not placed in cupboards, cabinets or like enclosures, or mounted face up. Receptacles of the extra-low-voltage system differ in configuration form those of the 120V or 120/240V system. Exterior receptacles are Class A GFCI. Low-voltage wiring and Extra-low-voltage wiring is insulated and rated for the highest voltage available in the recreational vehicle.

6.6.1.18 Receptacles in Bathrooms:

Receptacles are GFCI protected and placed as far as practically possible from a shower stall or bathtub.

6.6.1.19 Exterior Receptacles:

Receptacles installed onto the exterior of the vehicle are protected by a GFCI of Class A type.

6.6.1.20 Power convertors:

Power convertor installed in recreational vehicle are marked maximum ampere output not less than the ampere calculated by the following formula without including marked battery charging ampere and two- or three-way refrigerators (110V/12V or 110V/12V/propane): 100% of the first 20 A of load + 50% of the second 20 A of load + 25% of the load that exceeds 40 A.

6.6.1.21 Engine Driven Electric Generators:

Generators are mounted so that frames are reliably bonded to the RV chassis and in accordance with the manufacturer’s instructions. Compartments that house generators are vapor proof from the interior of the vehicle and vented in accordance with the manufacturer’s instructions. Supply conductors are stranded copper, installed

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

in flexible metal conduit, and terminate in a junction box. Overcurrent devices are mounted outside the generator compartment; however, junction boxes may be located within the generator compartment. The insulation rating of conductors within the generator compartment is not less than those supplied with the generator and in no case less than 90 degrees Celsius. The generator output conductor that is bonded to the generator frame is not protected by an overcurrent device. The generator is protected by an overcurrent device that is rated not higher than the current rating of the generator.

6.6.1.22 Transfer Switch:

The generator is installed with means to ensure the current carrying conductors from the generator or an outside source will not be connected to the vehicle circuit at the same time.

6.6.2 Extra-Low-Voltage Wiring:

6.6.2.1 General:

- Minimum 18AWG, type TEW.
- Grounded metal of the vehicle may be used for the return circuit.
- Insulated conductors are protected against physical damage, routed away from sharp edges, movable parts and heat sources and are adequately supported. Connections to electric components are readily accessible.
- All screw-type terminal connections are enclosed in a suitable box.
- Soldered joints are not used.
- Joints and splices in conductors are covered with insulation at least equivalent to the insulation on the conductors themselves.
- Where extra-low-voltage conductors pass through walls of boxes a provision is made to close the opening so that the remaining opening will not permit entrance of a 3.2mm diameter test rod.

6.6.2.2 Overcurrent Protection:

Approved overcurrent protection is rated or set at not more than 5A for No 18AWG, 10A for No. 16AWG, 15A for No. 14AWG, 20A for No. 12AWG and 30A for No. 10AWG and suitably enclosed in a noncombustible enclosure. Overcurrent devices for power supplies are located not more than 1.5m from the power supply and not more than 460mm (18”) from the point where the conductors enter the vehicle. If located outside the vehicle they are protected against weather and physical damage.

6.6.2.3 Lighting:

Branch circuit conductors to lighting fixtures have insulation rated at not less than 90 degrees Celsius. Devices are installed in fold down campers so that it is physically impossible to fold down the trailer unless the ceiling fixtures are disconnected.

6.6.2.4 Recreational vehicle outlets:

Cigarette-lighter-type connections are not installed. Grounding of exposed non-current-carrying metal parts of extra-low-voltage equipment is not required.

6.6.2.5 Storage Batteries:

Storage batteries are securely attached to the vehicle and installed in an area that is vapor-tight to the interior and ventilated to the exterior with openings having a minimum area of 1100mm2 (1.7in2) within 50 mm of the top and bottom. Batteries are not installed in a compartment containing spark producing equipment (other then the

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

engine generator compartment). Wiring is arranged to prevent damage or short circuiting of the wire.

6.6.2.6 Grounding and Bonding:

Exposed metal parts, including the chassis, are in good electrical contact with one another and with the termination of the grounding conductor of the supply circuit at the distribution panelboard. Current-carrying conductors and neutral conductors are not grounded within or on the RV. Sheathing of armored cable or conduit is not relied on for grounding purposes. Grounding conductors of the low-voltage system (other than the chassis and outer skin) are not used to carry current of any extra-low-voltage circuit. Grounding and bonding connectors (bolts, nuts, and lockwashers, or self-tapping screws and star lock washers) are made of nonferrous metal or plated steel, used for no other purpose than grounding or bonding, are protected from mechanical injury and are readily accessible for inspection and maintenance. Bare grounding conductors are located so there is no danger of contact with live parts. Bonding jumpers between the chassis, outer metal sheathing and the distribution panelboard have an ampacity rating not less than the power supply cord grounding conductor and are: (a) copper and protected from salt spray; (b) located in a position not subject to mechanical injury; and (c) suitably secured within 300mm of the attachment to the chassis. Other bonding jumpers have adequate current-carrying capacity and in no case are less than that of a No. 14 AWG copper conductor.

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

TESTS:

A QAI representative conducted plant inspections on the following dates.

PLANT ADDRESS	PLANT SECTOR	INITIAL INSPECTION DATE (DD/MM/YYYY)	LATEST PLANT INSPECTION DATE (DD/MM/YYYY)
355 North Delaware Street, Nappanee IN	Production Line	18/02/2009	13/04/2022
355 North Delaware Street, Nappanee IN	Engineering Department	18/02/2009	13/04/2022

At that time, typical production samples, representative of the models covered in this report, were examined for compliance with the CSA Z240 RV Series of Standards. No tests were required.

CONCLUSION:

Products were found to comply with applicable requirements and are acceptable for listing.

Issued By : Jennifer Willis

Jennifer Willis
Project Manager

Reviewed By : Jacky Chen

Jacky Chen
Project Manager

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. THE RESULTS OF THIS EVALUATION REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.