

LIMITED WARRANTY

Grote Industries, Inc. ("Grote") warrants its products to be free from defects in material and workmanship under normal use and service as set forth in this Limited Warranty. THIS LIMITED WARRANTY is the final, complete and exclusive expression of warranty to the purchaser and cannot be modified except in writing signed by an authorized officer of Grote.

GENERAL ONE-YEAR LIMITED WARRANTY

Subject to the following conditions, Grote warrants to the original purchaser only (and not to anyone else) of each new product made by Grote that any part thereof which proves to be defective in material or workmanship within one year from the date of manufacture by Grote will, at Grote's option, be repaired or replaced without charge upon return to Grote of the defective product, provided any defect in the product is brought to the attention of Grote within the warranty period, who alone will be authorized to furnish or arrange for repairs or replacements within the terms of this limited warranty.

The above limited warranty does not apply, and no warranty, either expressed or implied, shall be applicable (a) to damage resulting from accident, alteration, misuse or abuse; (b) if the product is not installed, operated and maintained according to procedures recommended by Grote; (c) if the serial number, date code, or other identifying marks affixed to the product by Grote are removed, obliterated or defaced. In no case shall the warranty be extended to defects in materials, components (which includes but not limited to bulbs), or services furnished by third parties nor to the installation of the product performed by third parties, except those performed by or on behalf of Grote authorized distributors. If any repairs are made, or any other parts are replaced during the warranty period, by any distributor other than a Grote distributor, in accordance with service manuals, parts, accessories, or attachments other than authorized by Grote for use in Grote's products, the purchaser shall pay for such repairs or parts without recourse against Grote, and Grote shall be relieved of responsibility for fulfillment of the warranty with respect to parts or components of all repairs, alterations, or replacements so made.

INSTALLATION GUIDELINES:

Grote Systems - Grote lamp assemblies and harness products are designed to function as a complete system; therefore, this limited warranty shall not extend to failure of any Grote products caused by the use of incompatible lamp assemblies, harness products or other components.

Heat - All electronic and lighting products produce heat. The installer is responsible for assurance that the application of the component will not result in contact with flammable material.

Surface Mount - The following procedures need to be practiced to assure proper installation: The lamp should be placed on a level unobstructed surface. Number 10 screws should be tightened to 25 in. pounds of torque. Only Grote ULTRA-BLUE-SEAL® pigtailed should interface with any Grote lamps. These guidelines will assure the products will function and last as they were designed. Deviations from these guidelines will void any warranty.

Design Voltage and Current - Current is provided as an approximate value and is listed for the design voltage of the lamp. The design voltage of the lamp may vary. Customers should contact Grote Industries if detailed information is required.

IN CONSIDERATION OF THE EXPRESS WARRANTY AND OTHER TERMS HEREIN CONTAINED, THE PURCHASER AGREES THAT PURCHASER'S EXCLUSIVE REMEDY AND GROTE'S SOLE LIABILITY ON ANY CLAIM, WHETHER IN TORT, CONTRACT OR WARRANTY, SHALL BE LIMITED TO, AT GROTE'S OPTION,

REPAIR OR REPLACEMENT OF A DEFECTIVE PRODUCT. NO OTHER REMEDY (INCLUDING BUT NOT LIMITED TO INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR THE LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY; OR ANY OTHER INCIDENTAL LOSS OR DAMAGES) SHALL BE AVAILABLE TO PURCHASER. IN NO EVENT, AND FOR NO CAUSE WHATSOEVER, INCLUDING ANY BREACH OR DEFAULT BY GROTE, SHALL GROTE HAVE ANY MONETARY LIABILITY TO PURCHASER IN EXCESS OF THE PRICE PAID BY PURCHASER FOR THE PRODUCT IN QUESTION.

THIS LIMITED WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER EXPRESSED OR IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF GROTE. NO DEALER, DISTRIBUTOR OR OTHER REPRESENTATIVE OF THE COMPANY IS AUTHORIZED TO CHANGE THIS WARRANTY IN ANY WAY OR TO GRANT ANY OTHER WARRANTY.

Any affirmation of fact or promise made by Grote shall not be deemed to create an expressed warranty that the products shall conform to the affirmation or promise. Any description of the product is for the sole purpose of identifying such product and shall not be deemed to create an express warranty that the product shall conform to the description. Any sample or product model is for illustrative purposes only and shall not be deemed to create an express warranty that the whole of the products shall conform to the sample or model. Further, no affirmation or promise, or description, sample or model shall be deemed a part of the basis of the bargain between Grote and the purchaser.

Grote assumes no responsibility that title conveyed to the purchaser is good or the transfer of title to the products is rightful, or that the products shall be delivered free from any security interest or other lien or encumbrance of any third party, or free from any rightful claim of any third party by way of infringement or otherwise.

NON-TRANSFERABLE

THIS WARRANTY SHALL EXTEND ONLY TO THE ORIGINAL PURCHASER AND IS NON-TRANSFERABLE.

EXCEPTIONS

The general one-year (1) limited warranty shall apply but shall be altered as set forth below for the following products:

- (1) All Grote Sealed Lamps (12 Volt Only) shall be subject to a two-year (2) limited warranty unless otherwise stated.
 - A) Grote Economy sealed lamps shall be subject to a one-year (1) limited warranty.
- (2) Conspicuity Tape shall be subject to a five-year (5) or ten-year (10) limited warranty. Please refer to the Grote catalog and/or Grote web-site for warranty time frame by part number.
- (3) Grote LED Products are subject to the terms set forth below under "Special LED Limited Warranty"
- (4) Grote ULTRA-BLUE-SEAL® Male Pin Wire Harnesses shall be subject to a seven-year (7) limited warranty.
- (5) Grote ULTRA-BLUE-SEAL® Female Pin (Standard) Harnesses shall be subject to a five-year (5) limited warranty.
- (6) Grote makes no warranty whatsoever with respect to bulbs and fluorescent tubes in lamp assemblies.
- (7) Grote makes no warranty whatsoever with respect to any and all devices powered by common household-type batteries.

SPECIAL LED LIMITED WARRANTY

Grote LED lamps are covered by the Grote Special LED Limited Warranty and are warranted to be free from defects in workmanship and/or material only for the specified time frames listed below. Grote will replace any Grote LED lamp to the original purchaser, if the Grote LED lamp fails due to defects in workmanship and/or materials during the warranty time frame specified below:

THE LED LIMITED WARRANTY DOES NOT APPLY TO SEVERE APPLICATIONS.

- (1) Grote LED lamps are to REMAIN INTACT, FREE FROM PHYSICAL ABUSE, SUBJECT TO PROPER INSTALLATION WITHOUT MODIFICATION AND MUST BE USED ONLY WITH GROTE APPROVED WIRING ACCESSORIES. ANY VIOLATION OF THESE CONDITIONS WILL VOID THIS LED LIMITED LAMP WARRANTY. For guidance regarding proper installation, please see above under "Surface Mount Installation Guidelines".
- (2) ANY DAMAGE DUE TO CHEMICALS OR INCOMPATIBLE CLEANERS WILL VOID THIS WARRANTY.
- (3) Grote LED lamps are designed to work in conjunction with the Grote ULTRA-BLUE SEAL® Wire Harness System including Grote factory molded pigtails for use with the Grote ULTRA-BLUE SEAL® Wire Harness System. Therefore, Grote LED lamps have a Limited Warranty based on the following criteria:

A – Grote SuperNova® high performance LED lamps are covered by a ten-year (10) Limited Warranty when installed with male pin, hard shell or patented double-seal pigtail connectors.

- 1) Grote SuperNova® high performance LED lamps are covered by a three-year (3) Limited Warranty when installed with hardwire bullet connectors.
- 2) Grote SuperNova® high performance LED lamps are covered by a two-year (2) Limited Warranty when installed with hardwire termination.

B – Grote MicroNova® high performance LED lamps are covered by a three-year (3) Limited Warranty when installed with hardwire bullet connectors.

C – Grote Hi Count® LED lamps (part numbers that begin with a G) are covered by a two-year (2) Limited Warranty.

D – Grote WhiteLight™ LED lamps are covered by a three-year (3) Limited Warranty.

E – Grote Select™ high value LED Stop/Tail/Turn and Backup lamps are covered by a two-year (2) Limited Warranty. Grote Select™ LED Flood Lamps are covered by a one-year (1) Limited Warranty.

F – Grote BriteZone™ LED lamps are covered by a two-year (2) Limited Warranty.

G – Grote Warning & Hazard LED's are covered by a two-year (2) Limited Warranty.

- 1) Any and all LED Devices powered by common household-type batteries are not covered by Grote's Limited Warranty.

H – Other Grote LED lamps for FMVSS applications excluding SuperNova®, MicroNova®, WhiteLight™ and Hi Count® are covered by a two-year (2) Limited Warranty.

I – Other Grote LED lamps (non-FMVSS) are covered by a one-year (1) Limited Warranty.

J – Grote LightForm® products are covered by a one-year (1) Limited Warranty.

LED Brand Category	Termination Style					
	Male Pin	Hard Shell	Female Pin	Hardwire w/Bullet Connectors	Hardwire	Patented Double-Seal Pigtail
Grote SuperNova®	10	10	N/A	3	2	10
Grote MicroNova®	N/A	N/A	N/A	3	N/A	N/A
Grote Hi Count®	N/A	N/A	2	N/A	2	N/A
Grote WhiteLight™	3	3	3	3	3	N/A
Grote Select™	N/A	N/A	2	N/A	1	2
Grote LightForm®	N/A	1	N/A	1	1	N/A
Grote BriteZone™	N/A	N/A	N/A	N/A	2	N/A
Grote Warning & Hazard LED's	2	N/A	N/A	2	2	N/A
Grote LED's (FMVSS)	2	N/A	2	2	2	N/A
Grote LED's (non-FMVSS)	N/A	N/A	N/A	1	1	N/A

N/A - Not Available or None

Number represents the years of warranty from manufacture date

QUALITY SYSTEMS:

Product within the catalog may be manufactured under various quality system certifications. If a customer requires particular quality certifications on specific products, they may contact Grote Industries for detailed information.

END USER RESPONSIBILITY:

Each user bears full responsibility for making their own determination as to the suitability of Grote materials, products, recommendations, or advice for their own particular use. Each user is ultimately responsible to identify and perform tests and analyses necessary to assure that its finished parts incorporating Grote products will be safe and suitable for use under end-user conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of this Limited Warranty or this Disclaimer, unless any such modification is specifically agreed to in writing signed by a Grote Industries Representative.

INTELLECTUAL PROPERTY:

No statement contained herein concerning a possible or suggested use of any material, product or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Grote Industries or any of its subsidiaries or affiliates covering such use or design, or as a recommendation for the use of such material, product or design in the infringement of any patent or other intellectual property right.

The information in this catalog is deemed correct at the time of publication and is provided in good faith. There may be inaccuracies due to legislative changes, competitive part number changes, technological advances or typographical errors. Customers should contact Grote Industries for updated information

WARRANTY RETURN AND REPLACEMENT INSTRUCTIONS

To be eligible for limited warranty consideration, either contact your Grote sales representative or call Grote customer service at 800.628.0809 (In Canada call 800.268.5612). Upon issuance of a returned goods authorization number, return the failed product, freight prepaid to: Warranty at Grote Industries, Inc., 2600 Lanier Drive, Madison, Indiana 47250. In Canada, return product, freight prepaid to: Warranty at Grote Industries Co., 230 Travail Road, Markham, Ontario L3S 3J1. Any product covered under the terms of the respective limited warranty will be replaced directly to the original consumer/purchaser only. Items received by Grote will not be returned unless accompanied by a specific written request. The product to be returned will be those items not covered under the warranty and will be returned to sender freight collect.

CONSUMER RIGHTS IN VARIOUS STATES

This warranty gives you specific legal rights, and you may have other rights that vary from state to state. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. Further, some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you.

Effective January 1, 2016

TRUCKLITE-TO-GROTE INTERCHANGE

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
41	40232	
43	40192	
45	41002	
50	43411	
52	41012	
54	41032	
172	44530	
173	44540	
182	44690	
183	44700	
262	44810	
263	44820	
264		44750
266		44730
270		44010
275		44010
276		44030
282	44710	
283	44720	
285		44891
286		44730
320		73140-5
536	82-0552	
550	82-0550	
790		43970
791		43970
792		43970
793		43970
794	49140	
797	71152	
798	71422	
801		43690
802		43970
809		43970
900		48072
901		48072
902		48072
905	48272	
910	48072	
1050		G1032
1075	G1082	
1203	46782	
1211	46792	
1213	46792	
1215	49082	
1216		49082
1222		45932
1233		45462
1259	45262	
1264	45932	
1507		46882
1520	45512	
1560	G1502	
1570		46392
1960	G1902	
2150	G2102	
2660	G4602	

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
2701		56052
2702		53052
2750		G5300
3050	G3002	
3070		G3002 + 43149
3075	G3092	
3612		52522
3616		52522
3701		56052
3762		50662
3801		56000
3802		56000
3806		56000
3812		53000
3850		55220
3860		55280
3861		55290
3863		50630
4015		50942
4016		50952
4017		50952
4018		50942
4023		52912
4024		52912
4025		52832
4026		52822
4027		50972
4028		52602
4050		G4002
4091		52062
4093		53062
4094		52062
4095	66905	
4742		55410
4754		55450
4854		55450
4855		55460
6050		G6002
6051		G6003
6503		55982
6506		53422
7038	12201-5	
7039	12004	
7217		28293-5
7218		28293-5
7223		12263-5
7224		12263-5
7268	12322-5	
7269	12323-5	
7518	28373-5	28423-5
7519	28423-5	28842-5
7555	28473-5	12193-5
7557	28472-5	12193-5
7575		28433-5
8004		64261-4, 63451-4
8150		63861
8155		63601
8160		63651
8170		63751
8861	99912	
8909		90232
8933		90202
8938		91502
9004		90302
9005		90052
9006		91962
9007		91962
9016		91582
9021		91582
9029		90012
9040		92172
9049		91302
9057		91992
9063		90502

Technical Information

Information Technique Información técnica

TRUCKLITE-TO-GROTE INTERCHANGE

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
9071		91302
9077		91172
9079		91502
9082		93252
9087		90132
9093		90122
9101	68130	
9102	68170	
9104	68080	
9105	68130	
9107	68110	
9162		68080
9179	43673	
9180	94110	94110
9291		64931
9341		90232
9372		92762
9944		77931
10403	67050	92920
10413		43690 67049
10704	91410	
10708	92920	
10724		43690
10728		43690
10730	43522	
10731		43690
10738		43690
15011	60280	
15012		60280
15013		60280
15040		60381
15041		60341
15053		60381
15054		60381
15055		60381
15058		60341
15059		60381
15060		60381
15061		60341
15205		60421
15208		60261
15227		60381
15404		43970
15405		43970
15406		43970
15407		43970
15408		43970
15409		43970
15412	43370	
15413		43370
15414	43380	
15415		46740
15416	46740	
15702	91380	
15727		43370
15728		43380
15729	43830	
15730		43830
15733		43370
17001		60021
17002		60021
17003		60191
17200		60191
19206	60301	
19720	43990	
19721	43850	
19723		43120
19724	43120	
19729		43782
19736		43120
19740	43990, 66202	
26330	60151	

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
26331	60101-5	
26335	60001	
26336	60251	
26723		61931
27003		90941-5
27009	90951	
27010		63451-4, 90951
27011		90951
27012	90951	
27270	90941	
27450	90941	
30286		77193
30402		67050 92149
30404		30721 67049
30405		93760 92120 67049
30407		43690 67049
30410		43690
30700	92120	
30702		92150
30704		92150
30706		94100
30707		94100
30711		92120
30721	93750	
30722	93760	
30726		93760
30727	43690	
30728	43532	
30729		93750
33712	94350	
35740	49212-5	
40003		61431
40004	62421	
40012	62321	
40023		61431
40024	62441	
40044	62181	
40203		61051
40204	62421	
40212	62321	
40224		62421
40244	62171	
40260	62171	
40261		62171
40262	62421	
40403		67090, 91739
40700	91740	
40701		91740
40702		91740
40703		91740
40715	43642	
40719		43572
40720	43572	
40725	43655	
40742		50812
40743		50812
40746		50812
40747		50812
40756		50802
40757		50792
40850		50820
40894		40850+G4002
42722	43272	
44101		77363
44102		77362
44110		65132
44114		77352
45700	94180	
45701		43642
45720	43212	
50831	93190	
50860	87860	
50896	87250	
55554		65340-5

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
60120		47472
60403		92420, 67089
60700	92420	
60719		92720
60720	43362	
60721		92420
60722		43952
60723		43362
60728		43952
60730		43362
60733		43952
60734		77363
70300		55220
70311		50630
80220		63821
80240		63831
80275		63821
80304	50222	
80340		62011
80342	55092	
80344	62151	
80345	62201	
80360	64931	
80361	64931	
80364	64931	
80368		64461
80373		64921
80374	64931	
80375	64931	
80378	64931	
80388		64891
80389		64891
80394		64891
80395		64891
80396		64891
80397		63821
80418		61371
80427	61161	
80438	64931	
80444		61371
80490	61031	
80491		64891
80492		64891
80493		64H01-5
80494		64891
80498		64891
80513	06021-4	
80514	06021-4	
80519	06013-4	
80520	63531	
80521	63531	
80522	06013-4	
80525		06021-4
80526		63531
80527		06013-4
80567		05001-5
80568		05001-5
80569		06013-4
80571		06013-4
80572	06013-4	
80573		06013-4
80574	06013-4	
80591	05001-5, 06013-4	
80592		06013-4
80593		06013-4, 05001-5
80594	82-0304	
80720	43262-5	
80722		43262-5
80800		63451-4
80804		63451-4
80805		63451-4
80810		63381
80820		63391
80830		63451-4

TRUCKLITE-TO-GROTE INTERCHANGE

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
80831		63451-4
80839		63451-4
80840		63451-4
80844		63451-4
80848		63381
80849		63391
80860		63391
80870		63381
80873		63391
80874		63381
80875		63451-4
80878		78563
80879		78563
80880		63451-4
80888		63451-4
80893		63451-4
80895		63381
80896		63391
80898		63451-4
80900		64261-4
80910		64241
80920		64251
80930		64261-4
80940		64261-4
80950		64241
80951		64251
80952		64241
80953		64251
80954		64241
80955		64251
80956		64241
80957		64251
80958		64241
80959		64251
80960		64241
80961		64251
80970		63451-4
80971		63451-4
80972		63451-4
80973		63451-4
80974		63451-4
80975		63451-4
81240		64H01-5
81245		64H01-5
81250		64H01-5
81255		64H01-5
81260		63871
81270		64H01-5
81290		64H01-5
81291		64H01-5
81295		64H01-5
81350		61491-5
81360		64H01-5
81365		64H01-5
81371		64H01-5
81374		64H01-5
81380		64E01, 64G11 64H01-5
81385		64H01-5
81390		64E11, 64G01 64H01-5
81391		64H01-5
81395		64H01-5
81500		63F21, 63F41 63F61, 63F71
81510		63F61
81520		63F61, 64H01-5
81560		63610
81701		63861
81702		83831
81704		63861
81711		63861

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
81712		83831
81714		63871
81801		63861
81802		63H81
81804		63871
81811		63861
81812		63H81
81814		63871
91241		56073
91242		56072
91243		55993
91244		53422
91315		54342
92545		16092
92546		16093
92550		77193
92551		77192
92560		77013
92563		77013
92600		77003
92602		76983
92672		76903
92673		76903
92674		77931
92677		77931
92695		76653
92844		77931
92845		77353, 77931
92846		77931
92867		76903
92868		76651
92871		77351
92877		76651
92884		77931
92885		77353
92900	73040	
92901		73040
92902		73090
92904		73030
92905	73080	
92909		73040
92910		73040
92911		73110
92916		73130
92918		73160
92924		73090
92925	44421	
93745		66931
94706		66830
94707		66861
94718		66930
94729	66981	
94736		66931
94750		66810
94802	66811	
94850	66800	
94853		66820
94862	66930	
94882	66844	
94897	66831	
94902	67050	
94909		67050
94916		67050
94919		67050
94924	67050	
94925	67010	
94926	67000	
94932	66810	
94940	68380	
94961	67011	
94962	66812	
94964	66801	
94972	66801	
94992		67010
94993	67090	

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
95220		92420
95306		66931
95410	66931	
96904	66201	
96919	66202	
96930	66360	
97005		66931
97050		66160
97224		64261-4
97252		77363
97283	44090	
97300	44040	
97302	44060	
97361		72110-5
97609		72100-5
97610		12020
97611	28162	
97612	28031	
97614	12813	
97615		12813
97618	28033	
97619	28162	
97620	28031	
97621	28663	
97623	28041	
97624	16284	
97625	16294	
97626	16304	
97627	16244	
97628		16244
97629	16202	
97630	16200	
97631	16191	
97632		16043
97633		28393
97636	16142	
97637	16141	
97644		16093
97653	12073	
97654	12072	
97655	12243-5	
97659		12193-5
97660	12111-5	
97664		28083
97665		28083
97666	22002	
97669		28453
97670		12333
97671		12331
97672		12303
97673	12301	
97674	12333	
97675		12333
97676	12331	
97678		28093-5
97681		28293
97682		28083-5
97686		12113
97687		28443
97688		28323
97694		16023
97695		16041
97718	13303	
97721		10025
97725	22233	
97726	22232	
97732	10113	
97733	11293	
97748		10623
97802	28032	
97803	16033	
97804	16032	
97805	12113-5	
97806	16091	

Technical Information

Information Technique Información técnica

TRUCKLITE-TO-GROTE INTERCHANGE

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
97807	12071	
97808	16101	
97809	16053	
97811	16092	
97812	16023	
97815	12183	
97816	12182	
97817	12173	
97818	16102	
97819	28663	
97820	28042	
97822	16123	
97823	10173	
97826		16063
97827	16223	
97828	10173	
97829	22193	
97831	12272-5	
97835		12020
97837	16053	
97840	28461	
97843	22013	
97845	29060	
97846		28193
97847	12303	
97848		12333
97860		16023
97861	16273	
97862		12153, 28491
97863	12010	
97865	28763	
97866	16153	
97869	10623	
97872	28033	
97940	99180	
97960	43901	
98100	40641	
98101	40650	
98104	40650-5	
98105		40641-5
98107	41080	
98126	41210	
98127	41160	
98136	40650	
98137	40641	
98146	41170	
98153	41121	
98165	41133	
99172	92951	
1001AD	45023-5	
1001D	45022-5	
10028R		45072
10028Y		45073
10050R		47472
10050Y		47473
10051R		47202+47122
10051Y		47203+66840
10075R		47232+91400+66840
10075Y		47233+91400+66840
10076R		47232+91400+66850
10076Y		47233+91400+66850
10079R		47372+66840
10079Y		47373+66840
10085R		47232+91400+66850
10085Y		47233+91400+66850
10086R		47232+91400+66850

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
10086Y		47233+91400+66850
10089R		47373+66850
10089Y		47373+66850
10090R		47232+91400+66850
10090Y		47233+91400+66850
10091R		47372+66850
10091Y		47373+66850
10092R		47232+43162+66850
10092Y		47233+43162+66850
10202C	45811	
10202R		45812
10202Y		45813
10204R		45182
10204Y		45183
10205R		45832
10205Y		45833
10208R		45832
10208Y		45833
10212Y		78343
10213Y		78343
10250R		47122
10251R		47122+43160
10251Y		47123+43160
10275R		47232
10275Y		47233
10276R	G1082	
10276Y	47223	
10279R		47372
10279Y		47373
10286R		47232
10286Y		47233
10288R		47422+66840
10288Y		47423+66840
10289R		47372+66840
10289Y		47373+66840
10375R		47232
10375Y		47233
10379R		47372
10379Y		47373
10385R		47232
10385Y		47233
10389R		47372
10389Y		47373
10391R		47232+43162
10391Y		47233+43162
1050A		G1033
10519R		45042
10519Y		45043
1051A		G1043
10520R		43670 45812 67049
10525R		45072
10525Y		45073
1052A		G1003
1070A		47372
1071A		47373
10744R	49142	
10745R		49142
1075A	G1083	
1203A	46783	
1211A	46793	
1211W	46791	
1213A	46793	
1222A		45933
1233A		45463
1259A	45263	
1264A	45933	
1312A	45333	
1320AD	46543-5	
1350A		46813
14200R	45232	

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
14200Y	45233	
15006R	43370	
15006Y	43370	
15008R	43380	
15008Y	43380	
15033R		47082
15033Y		45083
15050R		47182
15050Y		49182
1507A	46883	
15200C	60271	
15200R	46412	
15200Y	46413	
15201R	45162	
15201Y	45163	
1520A	45513	
1520AHT	45523	
1520HT	45522	
15250R	47082	
15250Y	47083	
15506R		45082
15506Y		46413
15507R		47083
15507Y		43970
1560A	G1503	
1570A		46393
15741R		49172
15745R	49172	
15745Y	49173	
18050R	47732	
18050Y	47733	
19002R	46742	
19002Y	46743	
19006R	47092	
19006Y	47093	
19009R		46742
19009Y		46743
19031R		47092
19031Y		47093
19032R	47092	
19032Y	47093	
19200C	60301	
19200R	46742	
19200Y	46743	
19205Y	78393	
19250R	G1902	
19250Y	G1903	
19275R	47492	
19275Y	47493	
1960A	G1903	
21001R		46832
21001Y		46833
21002R	46082	
21002Y	46083	
21004C		60031
21005R		45152
21005Y		45153
21051R		47032
21051Y	47073	
21056R	47352	
21056Y	47353	
21075R	G2102-5	
21075Y	G2103-5	
21080R		47032
21080Y		47033
21200R		46832
21200Y		46833
21201R		46072
21201Y		46073
21204C		60331
21205R		45152
21205Y		45153
21210Y	78363	
21251R	47072	
21251Y	47073	

TRUCKLITE-TO-GROTE INTERCHANGE

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
21256R	47352	
21256Y	47353	
21271R		54002+66815
21275R	47162	
21275Y	47163	
21501R	46872	
21501Y	46873	
21506R	46832 + 66910	
21506Y	46833 + 66910	
21507R	46872 + 66910	
21507Y	46873 + 66910	
2150A	G2103	
21880R	47072	
21880Y	47073	
22002R		53062+66905
22202R		53062
22202Y		53063
25250Y		47063
25750Y	47063	
25760Y	45503	
25761Y		46813
25765Y	46913	
25766Y		46913
26250R	47262	
26250Y	47263	
26251R		47262
26251Y		47263
263-4	44860	
26311R	46282	
26311Y	46283	
26313R		46892
26313Y		46893
26315R		45172
26315Y		45173
26392C		60251
26393C		60251
26394C		60251
2660A	G4603	
2661A	G4613	
26741R	49002	
26760Y		45993
26762Y		92773
26765Y	46543	
2701A		56053
2702A		53053
27270C	90941-5	
27450C	90951-5	
29002R		46832 + 66909
29002Y		46803+66911
29002Y		46833 + 66909
29004C		60331 + 66910
29004C		60331 + 66910
29202R		45442 or 45462
29202Y		45443 or 45463
29203R	46872	
29203Y	46873	
29204C	60331	
29204C	60331	
30050R		47112
30050Y		47113
30051R		47112
30051Y		47113
30070R		47112
30070Y		47113
30071R		47112
30071Y		47113
30075R	46132 +92120 + 67050	
30075Y	46133 +92120 + 67050	
30080R		G3002
30080Y		G3003

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
30085R		46132 + 92120 + 67050
30085Y		46133 + 92120 + 67050
30086Y	47113 + 92120 +67050	
30090R	46132 + 42180 + 67050	
30090Y	46133 + 42180 + 67050	
30091R	G3002 + 43150 + 67050	
30091Y	G3003 + 43150 + 67050	
300A		77103
30200C	45821	
30200R	45822	
30200Y	45823	
30201R	47102	
30201Y	47103	
30204R	45822 + 43690	
30206R	45202	
30206Y	45203	
30221R	45562	
30221Y	45563	
30222R		45822 + 43149
30222Y		45822
30230Y		78333
30250R	47112	
30250Y	47113	
30251R		47112
30251Y		47113
30257Y	78333	
30264Y	78433	
30269Y	78433 + 43150	
30270R	47112	
30270Y	47113	
30271Y	78423	
30272R	47112 + 43150	
30272Y	47113 + 43150	
30275R		G1092
30275Y		G1093
30276R		47212
30276Y	47213	
30277R		47112 + 43151
30277Y		47113 + 43151
30279R	46142 + 67050	
30279Y	46143 + 67050	
30285Y	G3003	
30288R	G3002 + 43152 +67050	
30288Y	G3003 + 43152 +67050	
30289R	G3002 + 43152 +67050	
30289Y	G3003 + 43152 +67050	
30375Y	46133	
30379R	46132 + 43150 + 67050	
30379Y	46133 + 43150 + 67050	
30503R	45062	
30503Y	45063	
3050A	G3003	
3070A		G3003 + 43149
30740R		49142
3075A	G3093	
307A		77103
307B		77105
307R		77102
328d	73140-5	
329d	73150-5	
33050R	49342	
33050Y	49343	
33051R		49342
33051Y		49343

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
33075R	49332	
33075Y	49333	
33080R		49332
33080Y		49333
33250R		49332
33250Y		49323, 49333
33275R		49342
33275Y		49343
35001R	65512	
35001Y	65513	
35080R	47242	
35080Y	47243	
35200R	47242	
35200Y	47243	
35880R	47242	
35880Y	47243	
36041C		60781
36042C		60791
3691W		60311
3693W		60311
3753AD		55243
3753D		55242
3754D		50642-5
3755A		55243
3756D		50642-5
3850AA		55223
40002R		52782
40002Y		52783
40006R		52770+91740+ 67000
40009R		52152+67000+ 91740
40009Y		52153+67000+ 91740
40015R		52672+67000+ 91740
40028R		53012
40028Y		53013
40029R		52692+67000
40041Y		55582
40201Y		55573
40202R		52772
40202Y		52773
40206C	61051	
40206R		52770
40209R		52152
40209Y		52153
40215R		52672
40226R		52672+92510
40229R		52691
4023Y106		52912
40241R		55572
40241Y		55573
40242R		52952
40248R		52672
4024Y106		52902
40258R		52952+92510
40259R		52952+92510
40282R		52922
40282Y		52923
4050A		G4003
4051A		G4022
4060C	62691	
4063C		62811
40898R		52952
4091A		52063
4091A		53063 + 66904
4093A		53063
4094A		52063+66905
4095A		53063+66905
41a	40233	
425WD	60631	
426W	60011	
433WD		60151
435W	60151	
43a	40193	

TRUCKLITE-TO-GROTE INTERCHANGE

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
44001Y		53413+67013+91740
44002R		53253+66830
44003Y		53313+91740+67002
44018Y		53413+91740+67002
44021Y		53503+66830
44022R		53272+67002
44023Y		53323+67002
44024Y		53182+67002
44026R		53182
44027Y		53513+66830
44030R		53462
44032R		53272+67002
44036R		53292+67002
44038R		53282+67002
44042C		61581
44046C		61581
44071Y		53313+67002+91740
44092R		53462
44101R		77352
44101Y		77353
44102R		77352
44102Y		77353
44103R		77352
44103Y		77353
44104R		77352
44104Y		77353
44110Y		77353
44110Y		77353
44114Y		77353
44144Y		77353
44181C		62101 + 92511 + 66861
44182C		62101 + 92512 + 66861
44201Y		53413
44202R		53312
44203Y		53313
44207C		61581
44211R		77352
44211Y		77353
44212R		77352
44212Y		77353
44213R		77352
44213Y		77363
44214R		77352
44214Y		77353
44217Y		77353
44217Y		77353
44218Y		77353
44218Y		77353
44221Y		53503
44222R		53272+67002
44223Y		53323
44224Y		53183
44226R		53182-3
44227Y		53513
44231Y		53282+67002
44237C		61141 or 61601
44248Y		77353
44248Y		77353
44249Y		77353
44249Y		77353
44253R		52092+67002
44302R		53252
44308C		61E41, 61H01
44322R		53292
44326R		53292
44328R		53282
44339C		61E01, 61G91

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
44344C		62101 + 92511 + 66861
44345C		62101 + 92510 + 66861
44346C		62101 + 92512 + 66861
44348C		62101 + 66862 + 92511
44349C		62101 + 92510 + 66861
44438C	61171	
44439C		61G91
44871Y		53313
44877Y		53323
44878Y		53183
44881Y		53413
44882R		53212
44887Y		53503
44888Y		53513
44982R		53252
44983R		53292
44986R		53292
44988R		53282
44991C		62101 + 92510
44992C		62791
45001Y		52233+94180+67090
45002R		52203+94180+67090
45002Y		52203+94180+67090
45051R		G4502+94180+67000
45051Y		G4503+94180+67000
45201Y		52233
45202R		52203
45202Y		52203
45251R		G4502
45251Y		G4503
45a	41003	
49002R		53112
49003C	62121	
49202R		53112
49203C		62121 + 91740 + 67012
5050DK		65320-5, 65880-5
5051DK		65330-5
52a	41013	
54a	41033	
60001R		55792
60001Y		55773+67000+91740
60002R		52572
60002Y		52573
60004C	62251	
60015R		52512+67000+91740
60015Y		52253
60050R		53122
60052R		53592+66830
60056R		53622+66830
60072Y		53593+66830
60075Y		53123
60083R		53092
60083Y		53093
60085R		53122
60115Y		52323+66830+92420
60117Y		52383+66830
60120R		77363
60120Y		77363
60122R		77362
60122Y		77363
60124R		77362
60124R		77362
60124Y		77363

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
60126R		77362
60126Y		77363
60201R		55572
60201Y		55573
60202R		52892
60202Y		52893-5
60204C	62231	
60215R		52512
60215Y		52193
60250R		53962
60252R		53592
60253R		52072
60255Y		52073
60256R		53622
60264R		52072
60272Y		53593
60275Y		53963
60276Y		53623
60283R		52182
60283Y		52183
60290Y		G4003
60315Y		52323
60317Y		52383
60360R		77362
60360Y		77363
60362R		77362
60362Y		77363
60364R		77362
60364Y		77363
60366R		77362
60366Y		77363
6050A		G6003
6051A		G6013
6058		54752, 54762, 54722
6060C	62751	
60872Y		53593
60885R		53962
60891Y		53963
610W		63211
612W		64891
613W		63231
620W		64101
620W4		64921
627WD		63111
628WD		63121
629WD		63111
630W		64931
630W4		64101
631W		64931
632W		64411
633W		64991
637W		63241
6503A		55993
6600A		77733
6600B		77635
6600MA		76663
6600R		77612
6600W		77611
6601A		77673
6601B		77735
6601R		77732
6601W		77671
6601WA		76663
66050R		53962+66830+92420
66052R		53592+66830
66056R		53622+66830
66205C		62051
66206C		62051 + 43222
66250R		53962
66252R		53592
66256R		53622

TRUCKLITE-TO-GROTE INTERCHANGE

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
6660PS		77931
66882R		53592
66885R		53962
6810A		76673
6810B		76665
6810MA		76673
6810W		76661
6822A		76463
6823A		76463
69002Y	52553	
69003C	62241	
69202Y	52533	
69203C	62241	
70310R		50642
70330R		55242
70330Y		55243
7044D	12014-5	
7044DB	12014	
7048D	12164-5	
7048DB	12164	
80162C		61861, 61F51
80164C		61861
80166C		61861
80255C	61F61	
80302R		50222
80302Y		50223
80322R		90013+50223
80324R		50532
80334R		50232
80335R		52522
80336R		52612
80339R		50502
80423C	60311	
81300R		55092
81300Y		90013+55092
81301R		55612
81301Y		55612+90763
81312Y		55450+91503
81335C		64M11-5
8370A		77931
8370B		77931
8370R		77931
8370W		77931
84206C		61G01
84216C		61E81, 61F01, 61G81
8861A	99913	
8933A		90203
8938A		91503
8939A		91513
8977A		90133
9004A		90303
9004W		90301
9005A		90053
9005W		90051
9006A		91963
9007A		91963
9007B		91965
9007G		91964
9007W		91961
9016A		91583
9016W		91581
9021A		91583
9021W		92581
9029A		90013
9029W		90011
90325Y		53883
9040A		92173
9057A		91993
9063A		91503
9074A		91513
9077A		91173
9078A		91503

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
9079A		91503
9080A		91513
9082A		93253
9087A		90133
9093A		90123
9093W		90121
91315R		54342
91315Y		54343
92513C		77811
92513Y		77813
92522Y	76703	
92524Y		76703
92525Y	76713	
92530C		77321
92530Y		77323
92531Y		77323
92534C		77101
92534Y		77103
92550Y		77353
92551Y		77363
92552Y		77353
92554Y		77013
92564C		76661
92564Y		76663
92565B		77735
92565C		77671
92565R		77732
92565Y		77671
92566Y		77673
92568B		77735
92568C		77671
92568R		77732
92568Y		77673
92569Y		77671
92600Y		76463
92602B	76035	
92602R	76032	
92602Y	76033	
92642Y		76983
92644Y		76993
92645Y		76980
92646Y		76993
92695R		77462
92695Y		77463
92696R		77462
92696Y		77463
92860Y		77633
92861Y		76663
92862Y		76663
92862Y		77633
92863Y		77123
92865Y		77813
92866Y		77153
92868Y		78473
92869Y		78473
92870B		77465
92870C		77461
92870R		77462
92870Y		77463
92871B		76655
92871C		76651
92871Y		76653
92872B		76655
92872Y		76653
92WD		62021
9341A		90233
9341B		90235
9372A		92763
9380SW	61161	
9380W		61161
98006r	40152	
98006y	40153	
98031r	41042	
98031y	41043	
98154r	41122	

TruckLite PN	Grote Form, Fit & Function	Grote Fit & Function
98175r	41142	
98175y	41143	
98176r	41152	
98176y	41153	
99007C	90761	
99007R		90762
99007Y		90763
99008C	91311	
99008R		90012
99008Y	90013	
99009R		90232
99009Y		90233
99039Y	90303	
99041R	90152	
99041Y	90153	
99066Y		92773
99090R		90232
99090Y		90233
99095C		90221
99167Y	90103	
99168R	99842	
99168Y	99843	
99169R	99832	
99169Y	99833	
99170R	99802	
99170Y	99803	
99171R	99912	
99171Y	99913	

PETERSON-TO-GROTE INTERCHANGE

Peterson PN	Grote Form, Fit & Function	Grote Fit & Function
45		43424
46		43901
294	G6151	
335		50630
337		53220
367	61871	
400		60001
415	G2271	
416	G2111	
435	60151	
449		71422
459		71152
500		48272
554		44810
557		44820
561		82-2150
570		44530
571		44540
572		44891
573		44690
574		44700
576		44710
577		44720
595		18103-5
598		18302-5
605		28032
608		12182
609		12071
615		16244
616		16092
654		28032
780		73080
781		73080
782		73030
784		73030
785		73080
810		28323-5
821		28093-5
830		12243-5
832		12113-5
833		12263-5

PETERSON-TO-GROTE INTERCHANGE

Peterson PN	Grote Form, Fit & Function	Grote Fit & Function
835		12263-5
836		12263-5
845	G5202	
2593		42180
2594		42180
4222		G6012
4223		G6013
4224		G4002
4469		65513
4470		65512
5000		44030
5100		44010
5124		44010
5404		81-1020
100-15A		90163
100-15R		90162
104-3R	49142	
107-15A		92433
107-15R		92432
107-3R		49112
107WA	46883	
107WR	46882	
108-15A		90203
108-15R		90202
108WA	46713	
108WR	46712	
110-15A		90303
110-15R		90302
117A		45993
118-15A	91683	
119-15A	90053	
119-15R	90052	
119A		45173
119R		45172
120-49	68380	
1200A		47913
1200R		47912
123A	46283	
123R	46282	
124-15A	90923	
124-15R	90922	
124A	46893	
124R	46892	
127-18	93402	
127-181	93400	
1274R		71152
130-25A		91043
130-25R		91042
134-15A		90123
134-15R		90122
135A	45263	
135R	45262	
136-15A	90153	
136-15R	90152	
136-3R	49062	
136A	45253	
136R	45252	
138-15A		91963
138-15R		91962
138A	46793	
138R	46792	
142-09	93750	
142-18	91410	
142-18K	94000	
142-49	67050	67001
142A	45813	
142KA	45043	45813 + 91400 + 67049
142KR	45042	45812 + 91400 + 67049
142R	45812	
143-092		43512
143-18	91410	

Peterson PN	Grote Form, Fit & Function	Grote Fit & Function
143-18K	94010	
143A	45833	
143R	45832	
144-18	92920	
145A	47013	
145R	47012	
146-09	93760	
146-092		43532
146-18	92120	
146-181	92120	
146-182	92150	
146-18K	94190	
146A	45823	
146R	45822	
150-09		94233
150-091	43380	42131
150-092		43970
150-095		43970, 94233
150-10	94233	
150-13		94233
150-14		43960
150-141		43962
150-3R	49172	
150-49		66932
150A	46413	
150C	60261	
150R	46412	
152-09		94233
152-091		94233
152-10		94233
152-49	67315	67400
153-09		94233
153-49	67001	66981
153A	47083	
153C-142		60671 + 43969
153C-143		600671 + 94232
153C-BT2	60671	
153R	47082	
154-09K	43850	
154-10K		43850, 43783 + 66980
154-11K		43850
154-49		67120, 99501
154A	46743	
154C	60291	
154KA	45093	
154KR	45092	
154R	46742	
155A		46833
155R		46832
160-09		43120
160-49		66910, 66930
160-491	66930	66910
160-492		66911
160-493		66932
161A		47093
161KA	65203	47093 + 66982 + 43779
161R		47092
162-49	67001	
162-493		66851
162A	47123	
162R	47122	
163A		G1033
163FA		G1033 + 42169
163FR		G1032 + 42169
163KA		G1033 + 91400 + 67000
163KR		G1032 + 91400 + 670000
163R		G1032
164A	47113	
164R	47112	
165-10		43690
165A		G3003

Peterson PN	Grote Form, Fit & Function	Grote Fit & Function
165R		G3002
166A		G3093
166R		G3092
168A		45003-5
168R		45002-5
172A		47123
172R		47122
173A		G1003
173R		G1002
174A		47113
174R		47112
176-10		42110
176-11		42292
176-12		42282
176-14		42302
176-16		42312
176-496		67120, 99501
176A-BT2		49333
176BKKA		49333 + 42109
176BKR		49332 + 42109
176KA	49333	
176KR	49322	
176R-BT2		49332
187A	47163	
187R	47162	
188A		G2103
188R		G2102
192-492		66826
2636A		46413 + 91380 + 67049
2636R		46412 + 91380 + 67049
2637A	45093	
2637R	45092	
298C	G6121	
313-2RA		55280
313AA		55220
318L		01-5616-70 + 01-5618-70
318L-P		01-5616-70 + 01-5618-70
318R		01-5616-70 + 01-5618-70
318R-P		01-5616-70 + 01-5618-70
319AA		56150-5, 56160-5
319R		01-5618-70, 56170-5, 56180-5
325-2		55410, 55470
337-2		53220
344-49		66861
344A		55470
350A-P		54183, 66815
350AF		54203
352A		52193
354A-AMP		54193
354AF-AMP		54213
393A		53133
394C	60361	
410-21		99595
411-07	68170	
413-07		68130
414-15C	91311	
415K	62221	
416K		62111 + 92420 + 67013
417-1		43572
417-2		43642
417-48		66862
417-481		66860
417-49	66861	
417-491	66860	66860
417-491MP		67006
417-493		67006

PETERSON-TO-GROTE INTERCHANGE

Peterson PN	Grote Form, Fit & Function	Grote Fit & Function
417C		62691
417C-5P		62101
417KR-5		53532 + 91739
417R-3P		53532
417R-5	53532	
417TA-5		54363
417TA-5P		52163
418C-P		62781
418R-3P		54572 + 66861
418R-5		53182
420C-5P		62561 + 66842
420CR-5		G6012
420KR-5		53962 + 92420 + 66829
420R-3P		54142 + 66860
420R-5		53962
420R-5P		53962 + 66829
421-09		43362
421-18	92420	92720
421-49	67014	67014
421-491	67090	66843
421-491Y		66810
421A		54183
421KA		53093
423C-5P		62561 + 43222 + 66842
423R-5		53622
423R-5P		53622 + 66830
424-09		43572, 92512
426-10		43655
426-18	91740	67150
426A		52923
426KA		52923, 91740+67090
431-49	67010	67011
431-491	67000	66825
436-01	93610	
440-15		92792
450KA		52203, 94180+66825
4523-49		66870
465-1		41160
465-4K		40650-5
465K		40650-5
510-9		43112
5406P		82-1011
5406S		82-1016
5407P		82-2149
55-15A	91113	
55-15R		91112
55-15R	91112	
551-41		82-2161
608X		12293
608XO		12173
610X		28493
616W		16091
654X		28033
657C		28373-5
658X		12272-5
667X		16093
668X		12153
670X		28443
671X		28443
672X		28493
701C		90941-5
702C + 703C		90951-5
717A		55982
717A-PKD		55982
717R	55983	
786-102		73160
786-97		73220
817C-3		62101
817KCR-3		01-5325-83 + 67006

Peterson PN	Grote Form, Fit & Function	Grote Fit & Function
817KR-3		53552 + 91740 + 67005
817KTA-3		53553, 66815
817R-2		53552
817R-3		53552
817TA-2		54363
817TA-3		53553, 66861
818C-3		62791
818KR-3		53292 + 91740 + 67006
818R-2		53292 + 67006
818R-3		53292 + 67006
818TA-2		54633
818TA-3		54633, 66815
820R-2		53962 + 67006
820R-3		54142
820R-7		54722, 54752, 54762, 54722
821R-3		G6002
822R-3		G6002 + 43222
823R-2		54132 + 43222
824R-3		G4002 + 92512
826R-3		G4002
845L	G5212	
850A-1		G4503
850A-1P		G4503, 66825
850R-1		G4502 + 67000
850R-1P		G4502 + 67000
880K-7		54672, 54682, 54702
882K-7		55162
883K-7		55202
904-MV		64H01-5
912-MV		64E01, 64E11, 64G01, 64G11
917-MV		63F21, 63F41, 63F61, 63F71
B107-15A		92433
B107-15R		92432
B1200-09X		93453
B127-18		94180
B134-15A		90123
B134-15R		90122
B138-15A		91963
B138-15B	91965	
B138-15C	91961	
B138-15R		91962
B142-18		91410
B142-49	67050	67001
B142-50		67001
B142-51		67001
B143-17	92070	
B143-18	91400	94010
B144-18	92070	
B146-09	93760	
B146-093	93760	
B146-18	92120	94100
B146-181		92120
B146-182	92150	
B146-184	92120	
B146-49		66932
B150-095		43970-3, 94233
B150-097		94233, 42162
B150-14	43960	
B150-141	43962	
B150-141B		43262
B150-142		43962
B150-143		43962
B150-18		91380
B150-181		91380
B150-491		67120
B152-49		66981, 67001-3, 67400
B153-492		66981
B153-493		66982
B153-494		66986

Peterson PN	Grote Form, Fit & Function	Grote Fit & Function
B154-092		43230
B154-11		43780
B154-11K		43780
B160-49		66930
B160-491		66930
B162-49		67001
B165-10		43690
B167-09		43780
B167-49		43780, 66981
B167-491		43780
B167-492		66801
B168-09	94233	43780
B168-092	94233	43120
B168-092B		43120
B168-093		43780
B168-10	94233	43673
B168-181		43120
B177-18	60-1084-03	
B192-492		66826, 66862
B2412		66932
B388-09X		93453
B411-07		68170
B413-07		68130
B417-49		66861
B417-491	66860	
B417-496		66860
B418-10		92513
B421-18	92420	
B421-19		67014
B421-49		67014
B421-491	67090	
B423-11	42153	42153
B426-18	91740	
B431-491	67000	
B45		43424
B450-18	94180	
B46		43901
B460A		40193
B460R		40192
B474A		40073
B474R		40072
B476A		40153
B476R		40152
B477A		40093
B477R		40092
B479A		41043
B479R		41042
B481A		40073
B481R		40072
B484A		40303
B484R		40302
B485A		40303
B485R		40302
B489A		40303
B489R		40302
B492A		40133
B492R		40132
B5425Y		68420
B5500A		82-1029
B5500B		82-1029
B570		44540
B7005S	43153	
B7007S	43823	
B7009S	43253	
B7011S	43723	
B817-48		68580
B850-18	94180, 94180-3	
M102A	45413-3	
M102R	45412-3	
M104-3R		49142
M104A	45413-3	
M104R	45412-3	
M106A	45933-3	
M106R	45932-3	
M107-3R	49112	

PETERSON-TO-GROTE INTERCHANGE

Peterson PN	Grote Form, Fit & Function	Grote Fit & Function
M107WA	46883-3	
M107WR	46882-3	
M108WA	46713-3	
M108WR	46712-3	
M109A		45333
M110A	45023-3	
M110C	45021-5	
M110R	45022-3	
M112A	46393	
M114A	49683-5	
M114R	46982-5	
M118A	46543	
M119A	45173	
M119R	45172	
M120A		99913
M120R		99912
M122A	46893	
M122R	46892	
M122XA	46893	
M122XR	46892	
M124A	46893	
M124R	46892	
M125A		47053
M125R		47052
M126A	47053	
M126C		47051
M126R	47052	
M127A	45233	
M127R	45232	
M129A		47503
M129R		47502
M130A	46303-3	
M130R	46302-3	
M135A	45263-3	
M135R	45262-3	
M136A	45253-3	
M136R	45252-3	
M137A		47253-3
M138C	46791	
M146C	45821	
M150C		60261
M150W	60271	
M153C-BT2	60671-3	
M154C	60291-3	
M171C	49341-3	
M171R-BT		49323
M171A-BT +176-10		49413
M2875A-P		53963
M2875AF-P		53263
M294		G6151
M298C		G6121
M305A		53063
M343A		54833
M351A		54183
M351AF		54203
M352A		52193
M352KA		52253
M355A		54193
M355AF		54213
M359-3		61E81, 61F01, 61G01, 61G81
M360	61261	
M360-BT2	61261	
M361		61171
M365		61F61
M367	61871-3	
M368		61F51
M393C	62291	
M394C	60361-3	
M400		60001-3
M411C		62151
M411SC	62151	

Peterson PN	Grote Form, Fit & Function	Grote Fit & Function
M415	62271-3	
M416		62111
M417C-1		62691
M417C-5		62101
M417C-5AMP		62010
M417C-5P		62101
M417TA		54643
M417TA-2P		54363, 66861
M417TA-5AMP		54363
M417TA-5P		52163
M418C-P		62781, 66842
M418TA-2P		54633, 66861
M418TA-5		54633
M418TA-5P		54633
M420C-5		62561 + 66842
M420C-5AMP		62561 + 67006
M420C-5P		62561 + 66831
M420C-5PKD		62561 + 67006
M420TA-2AMP		53963, 66815
M420TA-2P		G4503
M420TA-5		54143
M420VC-1P		62751
M423A-4		53963
M423C-5AMP		62561 + 43222 + 67006
M423C-5P		62561 + 43222 + 66831
M423TA-2AMP		53623, 66815
M423TA-2P		53623, 94180
M423VC-1P		62751 + 43222
M423W-4		61G31
M4260A		53533
M4260AF		53533
M431C	62271	
M431KC	62221	
M434		61501
M435		60151
M436B		60081
M436B-P		60081
M450A		52203
M817TA-2		54363
M817TA-2C		54633
M818TA-2		54633
M818TA-2C		54633
M829C-7		61E01, 61E41, 61G91, 61H01
M840		51962
M840L		51972
PM-ECK-T		99170
PMV0002-T		82-6554
PMV0099PT		99580
PMV0300T		83-6510
PMV0840PT	82-9543	
PMV0905PT	82-2161	
PMV0906PT	82-2167	
PMV0950PT	82-2166	
PMV0961PT	82-2165	
PMV0963PT	82-2209	
PMV0967PT	82-2165	
PMV0969PT	82-2209	
PMV1100KT	84-2190	
PMV1200KT	84-2390	
PMV1200PT	84-2390	
PMV1268KT	84-2400	
PMV1300KT	84-2190	
PMV1300PT	84-2190	
PMV1544KT	84-2704	
PMV1545KT	84-2702	
PMV1546KT	84-2702	
PMV1560KT	84-2383	
PMV1560PT	84-2383	
PMV1560QT	84-2383	
PMV1575PT		84-9613
PMV1700KT	84-2180	
PMV1705KT	84-2104	
PMV1725KT	84-2334	

Peterson PN	Grote Form, Fit & Function	Grote Fit & Function
PMV1749KT	84-2188	
PMV1755KT	84-2187	
PMV1800QT	84-2380	
PMV1805QT	84-2304	
PMV1806QT	84-2212	
PMV1808QT	84-2340	
PMV1825KT	84-2334	
PMV1855QT	84-2387	
PMV1856QT	84-2391	
PMV1858QT	84-2394	
PMV1864KT	84-2391	
PMV1865QT	84-2387	
PMV1900QT	84-2580	
PMV1905QT	84-2504	
PMV1908KT	84-2540	
PMV1909QT	84-2507	
PMV1913QT	84-2509	
PMV1955QT	84-2587	
PMV1956QT	84-2591	
PMV2250PT	84-2150	
PMV2260PT	84-2350	
PMV2270PT	84-2550	
PMV3157QT	84-2902	
PMV4008KT	84-3015	
PMV4138KT	82-9512	
PMV4238KT	82-9516	
PMV4239KT	82-9430	
PMV4339KT	82-9431	
PMV4439KT	82-9433	
PMV4539KT	82-9435	
PMV5140PT	83-6999	
PMV5141PT	83-7000	
PMV5142PT	83-7001	
PMV5143PT	83-7002	
PMV5503PT		82-2150
PMV5509PT		82-2151
PMV5510PT		82-2116
PMV5511PT		82-2116
PMV5512PT		82-2152
PMV5522PT		82-0600
PMV5530PT		82-1901
PMV5536PT		82-1905
PMV5537PT		82-1908
PMV5540PT		82-0219
PMV5543PT		82-2127
PMV5544PT		82-2127
PMV5546PT		82-2118
PMV5560PT		82-1909
PMV5561PT		82-1912
PMV5562PT		82-1910
PMV5563PT		82-1911
PMV5570PT		82-2106
PMV5571PT		82-1909
PMV5572PT		82-2127
PMV5576PT		82-2110
PMV5577PT		82-2111
PMV5579PT		82-0600
PMV5580PT		82-1901
PMV5583PT		82-1903
PMV5584PT		82-2130
PMV5587PT		82-2132
PMV7064PT		83-6000
PMV7066PT		83-6006
PMV7067PT		83-6020
PMV7074PT		84-6001
PMV7076PT		84-6007
PMV7077PT		84-6021
PMV7120QT		84-7003
PMV81101PT	89-5000	
PMV81103PT	89-5002	
PMV81121PT	89-6000	
PMV81123PT	89-6002	
PMV81141PT	89-7000	
PMV81142PT	89-7011	
PMV81143PT	89-7002	



PETERSON-TO-GROTE INTERCHANGE

Peterson PN	Grote Form, Fit & Function	Grote Fit & Function
PMV81145PT	89-7010	
PMV81147PT	89-7007	
PMV81161PT	89-8000	
PMV81162PT	89-8011	
PMV81163PT	89-8002	
PMV81164PT	89-8006	
PMV81165PT	89-8010	
PMV81166PT	89-8001	
PMV81181PT	89-9000	
PMV81183PT	89-9002	
PMV81187PT	89-9007	
PMV8221PT	84-5012	
V106-09		43673
V114A		46393-5
V126A		47053
V126C	47051	
V153KC-MV		60671 + 43969
V171C		49341
V25900-09		43272
V294		G6151
V298C		G6121
V306A		53133
V313-2RA		55280
V313AA		55220, 55223
V313R		50652
V335-2		50630
V361		61171
V366		61861
V369S		60591
V379S		61171
V417KTA		54643, 66815
V417KTA (+66815), M417TA		54643
V418KTA		54633, 66815
V428		50872-5
V428-09		43022
V434	61501-5	
V440		52302-5
V440L		52312-5
V472A		40233
V472R		40232
V475A		40063
V475R		40062
V480A		41033
V480R		41032
V483A		40303
V483R		40302
V487A		40133
V487R		40132
V490A		40053
V490R		40052
V500		48272
V520-10		68460-5
V520-40		44840-5
V5325		68540
V5400A		82-1031
V5401	82-1030	
V5402	82-1029	
V5404		82-1021
V5406-09		63942
V5413		82-2147
V5414		82-2146
V5415		82-2148
V5416		82-2146
V5417		82-2149
V5418		82-2142
V5425Y		68420
V5500A		82-1029
V5500B		82-1029
V560		82-2383
V570		44530

Peterson PN	Grote Form, Fit & Function	Grote Fit & Function
V582-2		64371-5, 64631-5
V599		12312
V600		12201-5
V600B-2		12201-5
V602		12164
V603		12204, 12004-5
V603B		12004
V603L		12014
V604		12312-5
V7004		43153
V7005	43153	
V7007	43163	
V7008		92513
V7009	92513	
V7009S	43253	
V7010		42153
V7011	42153	
V7011S	43723	
V780		73080
V781		73080
V783		73080
V940		65880-5

PRIMATRONICS-TO-GROTE INTERCHANGE

Primatronics PN	Grote Form, Fit & Function	Grote Fit & Function
PT1000A	45813	
PT1000A-ABS	78343	
PT1000BK	43512	
PT1000G	91410	
PT1000GK	94010	
PT1000R	45812	
PT1000R-Kit	45042	
PT1000W	45811	
PT1001BK	42180	
PT1002BK		43690
PT1002G	91400	
PT1003BK		42180+67049
PT1004G	91410	
PT100A-Kit	45043	
PT1050R	49142	
PT1100A	45833	
PT1100R	45832	
PT1300A	45333	
PT1300R	45332	
PT1500A	46413	
PT1500BK		42131
PT1500L	60261	
PT1500R	46412	
PT1500W	60271	
PT1550R	49172	
PT1900A	46743	
PT1900BK	43850	
PT1900L	60291	
PT1900R	46742	
PT1900W	60301	
PT2100A	46083	
PT2100R	46082	
PT2101A	46803	
PT2101R	46802	
PT2102A	46873	
PT2102R	46872	
PT2110C	60331	
PT2200A	53063	
PT2200R	53062	
PT2601A	45263	
PT2601R	45262	
PT2602A	46793	
PT2602R	46792	
PT2603A	45933	

Primatronics PN	Grote Form, Fit & Function	Grote Fit & Function
PT2603R	45932	
PT2605A	46893	
PT2605R	46892	
PT2610A		45233
PT2610R		45232
PT2615A	46783	
PT2615R	46782	
PT2630A	45253	
PT2630R	45252	
PT2640A	46883	
PT2640R	46882	
PT2650A	46893-5	
PT2650R	46892-5	
PT2660R	49112	
PT2700L	60151	
PT2701L	42162	
PT2702L	43960	
PT2703L	60460	
PT2704L	60101	
PT3000A	45823	
PT3000A-AB S	78333	
PT3000A-Kit	45063	
PT3000AF	45563	
PT3000AS		45813+42179
PT3000BK	43532	
PT3000G	92120	
PT3000GK	94100	
PT3000R	45822	
PT3000R-Kit	45062	
PT3000RF	45562	
PT3000RS		45812+42179
PT3000W	45821	
PT3300A	47103	
PT3300R	47102	
PT4000A	52923	
PT4000BK	43572	
PT4000G	91740	
PT4000MA	53103	
PT4000MR	53102	
PT4000R	52922	
PT4000R-Kit	53012	
PT4000RF	53612	
PT4000TK	68730-5	
PT4000W	62271	
PT4002G	91950	
PT4100R	52672	
PT4200BK	51090	
PT4200L	51032	
PT4200R	51022	
PT4200U	51052	
PT4212RF	50232	
PT4212RF-LN	90012	
PT4500A	52203	
PT4500BK	43212	
PT4500G	94180	
PT4500R	52202	
PT4706P	66860	
PT4707P	68580	
PT4902P		67050
PT4924P	67050	
PT4925P	67010	
PT4926P	67000	
PT4992P	67014	
PT4993P	67090	
PT4999P	67010	
PT5001A		77103
PT5001A		77473
PT5001A-FT		92980
PT5001A-LN		92033
PT5001A-LN		93723
PT5001MA		77203
PT5001MA-LN		92033
PT5005A	77013	
PT5005A-FT	92960	
PT5005A-LN	93013	

PRIMATRONICS-TO-GROTE INTERCHANGE

Primatronics PN	Grote Form, Fit & Function	Grote Fit & Function
PT5110		73040
PT5152A	76803	
PT5152A-LN	92883	
PT5175		73250
PT5199		73030
PT5215MA		76803+43239
PT5315A		76923
PT5315A-FT	90900	
PT5315MA	76933	
PT5412		44810
PT5413		44820
PT5453		44530
PT5454		44540
PT5469		44690
PT5471		44710
PT5481		44720
PT6000A	52183	
PT6000BK	43362	
PT6000G	92420	
PT6000R	52182	
PT6000R-Kit	53092	
PT6000W	62521	
PT6002G	92720	
PT6106P	67013	
PT6107P	67002	
PT6500A	52193	
PT8005	61821	
PT8010	91302	
PT8020	52442	
PT8020K	65240-5	
PT8021	52452	
PT8428	50872	
PT8428S	50892	
PT8428W	50882	
PT8620	53000	
PT9805A	40053	
PT9805R	40052	
PT9806A	40153	
PT9806R	40152	
PT9807A	40093	
PT9807R	40092	
PT9808A	40073	
PT9808R	40072	
PT9832A	41033	
PT9832R	41032	
PTL1004A		G1033
PTL1004R		G1032
PTL1013A		G1033
PTL1013R		G1032
PTL1108A	G1003	
PTL1108R	G1002	
PTL1313A		G1083
PTL1313R		G1082
PTL1503A	G1503	
PTL1503R	G1502	
PTL1508W	60421	
PTL1550R	49182	
PTL1912A	G1903	
PTL1912R	G1902	
PTL1912W	60301	
PTL2002C		G6151
PTL3004A		G3003
PTL3004R		G3002
PTL3009A	G3003	
PTL3009R	G3002	
PTL3309A	G3093	
PTL3309R	G3092	
PTL3507A		47243
PTL3507R		47242
PTL3606A		47243
PTL3606R		47242
PTL4010A		G4003

Primatronics PN	Grote Form, Fit & Function	Grote Fit & Function
PTL4010R		G4002
PTL4018A		G4003
PTL4018R		G4002
PTL4019W		62691
PTL4040A		G4003
PTL4040AF		G4003+92511
PTL4040R		G4002
PTL4040RF		G4002+92511
PTL4040W		62691
PTL4048A		G4003
PTL4048R		G4002
PTL5005A	77443	
PTL5020		63611
PTL5021	64931	
PTL5023	63221-5	
PTL5024	63231-5	
PTL5030		63G11
PTL5040		63G01
PTL5313A		G4603
PTL5313R		G4602
PTL5505A		45583
PTL5915A		47253
PTL6010A		G6003
PTL6010R		G6002
PTL6027W		62751
PTL6056A	G6003	
PTL6056R	G6002	
PTL8000		G5082
PTL8001		G5092
PTL8020		53662
PTL8020K		65230-5
PTL8021		53672
PTL8620		G5300
PTM0105	12164	
PTM09109	12312-5	
PTM9102	12201-5	
PTM9103	12004	
PTM9104	12014	
PTM9205FB	28152	
PTM9205K	28033	
PTM9205WK	28031	
PTM9206	28663	
PTM9206B		12052+11302
PTM9206BK		28042
PTM9206K	28043	
PTM9206WK	28041	
PTM9209	16033	
PTM9209B	16032	
PTM9209H		12283+11302
PTM9210	12010	
PTM9217		12293
PTM9217B		12182+11302
PTM9217H		12283+11302
PTM9219		12173+11302
PTM9219B		12172+11302
PTM9219H		12283+11302
PTM9219LED-L		12143
PTM9219LED-R		12133
PTM9248		28763
PTM9300A	16244	
PTM9310		16023
PTM9310H	16053	
PTM9310HL	16173	
PTM9320	16123	
PTM9320CV	16043	
PTM9320H-L	16223	
PTM9330	16273	
PTM9330B	16142	
PTM9340	16023	
PTM9340H		16053
PTM9340HL		16223
PTM9350	16093	
PTM9350B	16092	
PTM9350W	16091	
PTM9360B	16102	

PTM9360W	16101	
PTM9370	16284	
PTM9370H		16294, 16304
PTM9420		28453
PTM9460	28093-5	
PTM9706	28323-5	
PTM9710S	22013	
PTM9712	10173	
PTM9714	11303	
PTM9716	11133	
PTM9717	10073	
PTM9718	10173	
PTM9720	10623	
PTM9724		10013
PTM9726		10025
PTM9730		10045
PTM9800	22193	
PTM9809	28443	
PTM9810	28493	
PTM9830	12153	
PTM9840	10433	
PTM9900	29060	

MAXXIMA-TO-GROTE INTERCHANGE

Maxxima PN	Grote Form, Fit & Function	Grote Fit & Function
M09100R	G3002	
M09100WCL		60561
M09100Y	G3003	
M09105R	G3092	
M09105Y	G3093	
M09250R-X	G3092-3	
M09250Y-X	G3093-3	
M09300R		49332
M09300R-X		49332-3
M09300R-XBC		49332-3
M09300RAS		49362
M09300WCL		49341
M09300Y		49333
M09300Y, M09320Y-X		49323
M09300Y-X		49333-3
M09300YAT		49323
M09320R-X		49322-3
M09320Y-X		49323-3
M09370BCL		77935 & 97942
M09370R		77932
M09370RCL		77932 & 97941
M09370WCL		77931 & 97941
M09370WCL-NS		60651
M09370Y		77933 & 97942
M09370YCL		77933 & 97942
M09410R		49322
M09410WCL		49341
M09410Y		49323
M11201R	G1082	
M11201Y	G1082	
M11256R	G1092	
M11256Y	G1093	
M11260R-X	G1002-3	
M11260Y-X	G1003-3	
M11300R	G1032	
M11300RCL	G1042	
M11300Y	G1033	
M11300YCL	G1043	
M11303R		49162
M11350R-X		G1092
M11350RCL-X	G1042	
M11350Y-X		G1093
M11350YCL-X	G1043	
M16280ABS		78423
M16280R		G1092
M16280R-X		G1092
M16280RCL		G1002

MAXXIMA-TO-GROTE INTERCHANGE

Maxxima PN	Grote Form, Fit & Function	Grote Fit & Function
M16280Y		G1093
M16280Y-X		G1092-3
M16280YCL		G1003
M16800R		G1082
M16800Y		G1083
M20311R	G5052	
M20311Y	G5053	
M20320R	G1502	
M20320Y	G1503	
M20321R		G1502 & 43979
M20321Y		G1503 & 43979
M20323R		49182
M20325		94233
M20327		43980
M20328		43980
M20332R	45662	
M20332Y	45663	
M20340R		47242
M20340Y		47243
M20343R		49122
M20350R	G1902	
M20350Y	G1903	
M20350YCL	G1913	
M20355		43850
M20356		43850
M20361R		47062
M20361Y		47063
M20378Y		78473
M20391R	G2102	
M20391R-X	G2102-3	
M20391Y	G2103	
M20391Y-X	G2103-3	
M20395R		46832
M20395Y		46833
M23015R		G4602
M23015Y		G4603
M23015YCL		G4613
M34260R		G3002
M34260R-X		G3002-3
M34260Y		G3003
M34260Y-X		G3003
M34600R		G3092
M34600Y		G3092
M42100R		G4002
M42100Y		G4003
M42120R		G4002 & 92511
M42201R		G4502
M42201Y		G4503
M42213R		G4502
M42213Y		G4503
M42220	G5092	
M42320R		G4002
M42322R		G4002
M42322R-X		G4002-3
M42322RCL		G4022
M42322Y		G4003
M42323R		G4002 & 92511
M42323RCL		G4022 & 92511
M42324		62691
M42324-X		62691-3
M42339Y		G4003
M42341Y		56150-5
M42344R		54362
M42344R-X		54362-3
M42346R		54342
M42346R-X		54342-3
M42347		62691
M42347-X		62691-3
M42348		62101
M42348-X		62101-3
M42354		54602 & 67002

Maxxima PN	Grote Form, Fit & Function	Grote Fit & Function
M42354		62811
M42354R		54602
M42354R-X		54602-3
M42354Y-X		54603 & 67006
M42354Y-X		54573
M42355R		54342
M42355R-X		54342-3
M42500R		54342
M42500Y		54343
M42701BCL		77355
M42701R		77352
M42701WCL		77351
M42701Y		77353
M42705Y	77443	
M43253		43253
M43253CH		43253
M43900	67150	
M49700	94180	
M50100-B	94010	
M50100-X	94010-3	
M50102-X	92070-3	
M50103		43163
M50300-B	92120	
M50300-X	92120-3	
M50310	43673	
M50312		43230
M50400-B	91740	
M50400-X	91740-3	
M50600-B	92420	
M50600-X	92420	
M50605		43223
M50607		92420
M50900	67090	
M50900-100	67090-3	
M50900-X	67090	
M50904		66831
M50908		66861
M50909		44070
M50910		99630
M50911	67000	
M50950	67001	
M50950-X	67001-3	
M50950A-100		68551
M50951		67001
M50951A-100		68551
M50953		66862
M56100R		G4002
M63100R		G6002
M63100Y		G6003
M63201BCL		77365
M63201R		77362
M63201WCL		77361
M63201Y		77363
M63253	43223	
M63253BLK	43222	
M63253CH	43723	
M63254	43723	
M63320		62751 & 42151
M63320R		G6002 & 42151
M63320RCL		G6012 & 42151
M63320Y		G6003 & 42151
M63321R-X		G6002 & 42151
M63322R		G6001
M63322R-X		54722, 54752, 54762
M63322RCL		G6002 & 42152
M63322Y		G6002-3 & 42152-3
M63322YCL		G6013 & 42151
M63323R		G6002 & 43221
M63323Y		G6003 & 43221
M63323YCL		G6013 & 43221
M63324		62751 & 92419
M63324-X		62751-3 & 92420-3

Maxxima PN	Grote Form, Fit & Function	Grote Fit & Function
M63339Y		G6003
M63339YCL		G6013
M63340YCL		G6013
M63346R		G6002
M63346R-X		G6002-3
M63347		62751
M63347-X		62751-3
M63352R-X		G6002
M63420R		G6002
M63420Y		G6003
M63450R		G6002
M63450Y		G6003
M84408		61291
M84409		61291
M84410		61881
M84415		61611
M84419-B		61G81
M84420-B		60581
M84422-B		61281
M84423-A		61E81, 61E91, 61F01, 61F11, 61G81
M84427		61931
M84427-A		61F51
M844281		61E81
M84429		61281, 61G01
M84433		61411
M84435		61391
M84436		61E01, 61E41, 61G91, 61H01
M84440		61F61
M85416R		55162, 55172, 55202
M85615R		54672, 54682, 54702
M90061R		53422
M90081Y		55982
MEG-1	99170	
MHL-07HILO		90941-5
MHL-5X7HILO		90951-5
MWL-01B		63861
MWL-01HP		63861
MWL-01LS		63861
MWL-04		63611
MWL-05SP		63611
MWL-07SP		63611
MWL-10SP		63981-5
MWL-11HL		63981-5 & 64930
MWL-12		63981-5
MWL-16		63981, 63F21, 63F41, 63F61, 63F71
MWL-19		63861
MWL-20		64H01-5
MWL-20FB		64H01-5
MWL-20LS		64H01-5
MWL-21		63611
MWL-22		63611
MWL-25SP		64E01, 64E11, 64G01, 64G11

OPTRONICS-TO-GROTE INTERCHANGE

Optronics PN	Grote Form, Fit & Function	Grote Fit & Function
212767	66200	
00212135P	45853	
00212207B	45793	
00212209B	45792	
00212211B	66200	
00212211P	66200	
00212212B	66200	
00212217B	93473	
00212217B	93473	
00212217P	93473	
00212220P	45793	
00212222P	93473	
00212226P	66200	
00212231B	45763	
00212231P	45763	
00212233B	45762	
00212233P	45762	
00212235P	45773	
00212237P	45772	
00212251B	45783	
00212251P	45783	
00212257P	45792	
00212307B	45623	
00212315B	45643	
00212316B	66200	
00212316P	66200	
00212317B	93453	
00212317P	93453	
00212331B	45583	
00212331P	45583	
00212333B	45572	
00212333P	45572	
00212338P	47772	
00212342B	45593	
00212342P	45593	
00212345P	45603	
00212351B	45613	
00212351P	45613	
00212353B		45572
00212353P		45572
00212355P	45623	
00212362B	45663	
00212362P	45663	
00212365P	45643	
00212704P	47913	
00212705P	47912	
00212706P	47923	
00212707P	47922	
A111GLPBP		42162
A11AB	92433	
A11AB	92433	
A11ABP	92433	
A11ABP	92433	
A11GLPB		42162
A11RB	92432	
A11RB	92432	
A11RBP	92432	
A24RB	90232	
A24RBP	90232	
A2RB	91122	
A2RBP	91122	
A31AB		90203
A31ABP		60203
A31RB		90202
A31RBP		90202
A33GB	94180	
A33GB	94180	
A33GBP	94180	
A38AB	90203	
A38ABP	90203	
A38RB	90202	
A38RBP	90202	

Optronics PN	Grote Form, Fit & Function	Grote Fit & Function
A40RB	90012	
A40RBP	90012	
A40SRB	99595	
A40SRBP	99595	
A42AB	91963	
A42ABP	91963	
A42RB	91962	
A42RBP	91962	
A45BB	92512	
A45BBP	92512	
A45CB	67010	
A45CB	67010	
A45CBP	67010	
A45CBP	67010	
A45GB	91740	
A45GB	91740	
A45GBP	91740	
A45GBP	91740	
A45PB	67000	
A45PBP	67000	
A45PMB	66861	
A45PMBP	66861	
A45PS	67000-5	
A45SB	43253	
A45SBP	43253	
A46PB	67050	
A46PBP	67050	
A46PS	67050-5	
A47PB	67090	
A47PBP	67090	
A47PS	67090-5	
A49PB	67014	
A49PB	67014	
A49PBP	67014	
A49PBP	67014	
A54GB	92120	
A54GBP	92120	
A54GK	94100	
A54GKP	94100	
A55GB	91410	
A55GBP	91410	
A56GB	92070	
A56GBP	92070	
A57GB	91400	
A57GBP	91400	
A57GK	94010	
A57GKP	94010	
A58GB	91880	
A60RB	91302	
A60RBP	91302	
A66PB	43850	
A66PBP	43850	
A68AB	90153	
A68ABP	90153	
A68P		66981
A68RB	90152	
A68RBP	90152	
A70GB	92420	
A70GBP	92420	
A75TB	82-2148	
A75TBP	82-2148	
A78CB		42153
A7WCB	82-1056	
A7WCBP	82-1056	
A81AB	90923	
A81ABP	90923	
A81RB	90922	
A81RBP	90922	
A8R		92792
A8RB	92792	
A8RB	92792	
A8RB	92792	
A8RBP	92792	
A8RBP	92792	
A91AB	46413	

Optronics PN	Grote Form, Fit & Function	Grote Fit & Function
A91ABP	46413	
A91B	46413	
A91GB	91380	
A91GB	91380	
A91GBP	91380	
A91GBP	91380	
A91LW		67120
A91LWP		67120
A91OB	94233	
A91OBP	92433	
A91PB	46413	
A91RB	46412	
A91RB	46412	
A91RBP	46412	
A91RBP	46412	
A93PB	69710	
A93PBP	69710	
A9R		91112
A9RB	91112	
A9RBP	91112	
A9TB	91112	
AL12GLPB	43962	
AL12GLPBP	43962	
AL45PWTB	66860	
AL45PWTB	66860	
AL45PWTBP	66860	
AL46AB	91963	
AL46RB	91962	
AL90AS		G1903-5
AL90RB		47082
AL90RBP		47082
AL90RS		G1902-5
AL91RB		47082
AL91RBP		47082
AR16RB		90562
AR17RB		90562
BK42CB	43673	
BK42CBP	43673	
BK45BB	43572	
BK45BBP	43572	
BK53BB		93760
BK53BBP		93760
BK557GB	42180	
BK557GBP	42180	
BK55BB	43512	
BK55BBP	43512	
BK57BB		93750
BK57BBP		93750
BK66DB		43230
BK66DBP		43230
BK70BB	43363	
BK70BBP	43363	
BU31CB	62291	
BU31CBP	62291	
BU33CB	62381	
BU33CBP	62381	
BU44CB	62221	
BU44CBP	62221	
BU45CB	62271	
BU45CBP	62271	
BU70CB	62521	
BU70CBP	62521	
BUL10CB		62751
BUL10CBP		62751
BUL11CB		62691
BUL11CBX		62691
BUL11CBXP		62691
BUL11CKB		62691+67090+91740
BUL11CKBP		62691+67090+91740
BUL11CMB		62101
BUL11CMBP		62101
BUL13CB		64971
BUL13CBP		64971
BUL16CBP		62691

OPTRONICS-TO-GROTE INTERCHANGE

Optronics PN	Grote Form, Fit & Function	Grote Fit & Function
MCL55AKB		G3003+67050+92120
MCL55FRB	43532	
MCL55RB		G3002
MCL55RBP		G3002
MCL55RKB		G3002+67050+92120
MCL56AB		G3003
MCL56ABP		G3003
MCL56AS		G3003-5
MCL56RB		G3002
MCL56RBP		G3002
MCL56RS		G3002-5
MCL57AB		G1033
MCL57ABP		G1033
MCL57ABP		G1033
MCL57RB		G1032
MCL57RBP		G1032
MCL57RCB		G1042
MCL57RCBP		G1042
MCL58AB		46143
MCL58RB		46142
MCL58RBP		46142
MCL59AB	G1003	
MCL59ABP	G1003	
MCL59RB	G1002	
MCL59RBP	G1002	
MCL61AB		G1903
MCL61ABP		G1903
MCL61AS		G1903-5
MCL61RB		G1902
MCL61RBP		G1902
MCL61RS		G1902-5
MCL63AB		G1903
MCL63ABP		G1903
MCL63CAB		G1913
MCL63CABP		G1913
MCL63RB		G1902
MCL63RBP		G1902
MCL65AB		G1903
MCL65ABP		G1903
MCL65CAB		G1913
MCL65CABP		G1913
MCL65RB		G1902
MCL65RBP		G1902
MCL66AB		47243
MCL66ABP		47243
MCL66APG		47243
MCL66RB		47242
MCL66RBP		47242
MCL67RB		G1902+43790
MCL67RBP		G1902+43790
MCL70RB		49192
MCL70RBP		49142
MCL75AB		G1903
MCL75ABP		G1903
MCL76AB		G2103
MCL76ABP		G2103
MCL76RB		G2102
MCL76RBP		G2102
MCL83RB		49182
MCL83RBP		49182
MCL84RB		49182
MCL84RBP		49182
MCL90AS		G1503-5
MCL90RS		G1502-5
MCL93RB		49182
MCL93RBP		49182
MCLLRKB	49332	
NC65ARB	46740	
RB10A		76033
RB10R		76032

Optronics PN	Grote Form, Fit & Function	Grote Fit & Function
RB15RBP	40132	
RE10AB	40303	
RE10ABP	40303	
RE10AK	40133-5	
RE10RB	40302	
RE10RBP	40302	
RE11AB	41033	
RE11ABP	41033	
RE11RB	41032	
RE11RBP	41032	
RE12AK		41033-5
RE12ARK		
RE12RK		41032-5
RE15AB	40133	
RE15ABP	40133	
RE15AK		40133-5
RE15RB	40132	
RE15RK		40132-5
RE18T		40650-5
RE21AB	40053	
RE21ABP	40053	
RE21AS	40053-5	
RE21RB	40052	
RE21RBP	40052	
RE21RS	40052-5	
RE31AS	40233-5	
RE31RS	40232-5	
RE35AB	41013	
RE35ABP	41013	
RE35RB	41012	
RE35RBP	41012	
RE37AB	41003	
RE37ABP	41003	
RE37RB	41002	
RE37RBP	41002	
RE418T		40650-5
RT150WBD	40641	
RT150Y2DB	41133	
RT150Y2DBP	41133	
RTR03150711CB		41160
RTR1015066CB		41050
RTR10150711CB	40650	
RTR10150WB		40641
RTR15066B	41050	
RTR15066BP	41050	
RTR150711B	41160	
RTR150711BP	41160	
RVPL1C	61641	
RVPL1CP	61461	
RVSL21	61793	
RVSL21P	61793	
RVSL31	61791	
RVSL31P	61791	
ST16RB	52482	
ST16RBP	52482	
ST17RB	52492	
ST17RBP	52492	
ST201RS		50872-5
ST25RB	50862	
ST25RBP	50862	
ST2RB	52442	
ST2RBP	52442	
ST31RB	53132	
ST31RBP	53132	
ST33AB	52203	
ST33ABP	52203	
ST33RB	52202	
ST33RBP	52202	
ST3RB	52452	
ST40RB	50232	
ST40RBP	50232	
ST40RS	50232-5	
ST42RB	50852	
ST42RBP	50852	
ST44AB		52923+91740+67090

Optronics PN	Grote Form, Fit & Function	Grote Fit & Function
ST44RB	53012	
ST44RBP	53012	
ST45AB	52923	
ST45ABP	52923	
ST45B	52922	
ST45RBP	52922	
ST45RGB	53102	
ST45RGBP	53102	
ST45RK	53012-5	
ST45RS	52922-5	
ST46RB	52672	
ST46RBP	52672	
ST46RKB	52682	
ST46RKBP	52682	
ST4RB	51932	
ST4RBP	51932	
ST51RS	50630-5	
ST52AAP	55223	
ST52RA	55220-5	
ST52RB	50630	
ST52RBP	50630	
ST56RS	53812	
ST57AB	52193	
ST57ABP	52193	
ST57RS	53822	
ST5RB	51942	
ST5RBP	51942	
ST70AB	52183	
ST70ABP	52183	
ST70RB	52182	
ST70RBP	52182	
ST70RS	52182-5	
ST74AB	53093	
ST74ABP	53093	
ST74RB	53092	
ST74RBP	53092	
ST77AB	52253	
ST77ABP	52253	
ST7RB	53672	
ST7RBP	53672	
ST8RB	52302	
ST8RB	53662	
ST8RBP	52302	
ST8RBP	53662	
ST8RS	50302-5	
ST9RB	52312	
ST9RBP	52312	
ST9RS	50312-5	
STL12RB		54172
STL12RBP		54172
STL12RMB		54142
STL13K		54342+67090+91740
STL13RB		54342
STL13RS		G4002-5
STL22AB		G6003
STL22ABP		G6003
STL22RB		G6002
STL22RBP		G6002
STL22RCBP		G6012
STL23AB		G4003
STL23ABP		G4003
STL23RB		G4002
STL23RBP		G4002
STL28RB		51982
STL28RBP		51982
STL33RB	G4502	
STL33RBP	G4502	
STL34RB		52202+94180+97090
STL35AB	G4503	
STL35ABP	G4503	
STL35RB		G4502
STL35RBP		G4502
STL43AB		G4003
STL43ABP		G4003

OPTRONICS-TO-GROTE INTERCHANGE

Optronics PN	Grote Form, Fit & Function	Grote Fit & Function
STL43RB		G4002
STL43RBP		G4012
STL43RKB		G4012
STL52ARB	G5300	
STL52ARBP	G5300	
STL53ARDB	G5530	
STL53ARDBP	G5530	
STL53ARPB	G5540	
STL53ARBPB	G5540	
STL53RCB		G4022
STL543AB		G4003
STL543ABP		G4003
STL543RB		G4002
STL543RBP		G4002
STL55AB		G4003
STL55ABP		G4003
STL55RB		G4002
STL55RBP		G4002
STL572AB	G6003	
STL572ABP	G6003	
STL572RB	G6002	
STL572RBP	G6002	
STL60RB	G5082	
STL60RLB	G5092	
STL68RB		54682
STL6RS	51982-5	
STL6RS	51992-5	
STL70AB	G6003	
STL70ABP	G6003	
STL70RB	G6002	
STL70RBP	G6002	
STL72AB		G6003

Optronics PN	Grote Form, Fit & Function	Grote Fit & Function
STL72ABP		G6003
STL72RB		G6002
STL72RBP		G6002
STL72RS		G6002-5
STL74RKB		G6002+67090 +92420
STL74RKBK		G6002+67090 +92420
STL79RB	53582	
STL82RCB		G6012
STL82RCBP		G6012
STL8RB	51982	
STL8RBP	51982	
STL90AB	55993	
STL90ABP	55993	
STL90RB	53422	
STL90RBP	53422	
STL9RB	51992	
STL9RBP	51992	
TL10CB	64931	
TL10CBP	64931	
TL10CS	64931-5	
TL15RK		65300-5
TL27BK	65370-5	
TL29BK		65370-5
TL35FS	63111-5	
TL46FS	64891	
TL46TS	63231-5	
TL5RK	65230-5	
TL6K	65440-5	
TL9RK		65230-5
TLL22RK		G6002+67090 +92420
TLL29RK	65330-5	
TLL44FB		63821
TLL44FBP		63821

Optronics PN	Grote Form, Fit & Function	Grote Fit & Function
TLL44FS		63821-5
TLL45FB		63821
TLL45FBP		63821
TLL46CFB		63E21
TLL46CFBP		63E21
TLL46TB		63E21
TLL46TBP		63E21
TLL48FB		63E21
TLL48FBP		63E21
TLL50FS		63E21
TLL52FB		64H01-5
TLL52FBP		64H01-5
TLL52FS		64H01-5
TLL52FWB		64H01-5
TLL52FWBP		64H01-5
TLL54TB		63H31
TLL54TBP		63H31
TLL9RK	65320-5	
UCL11CKB		60721
UCL11CKBP		60721
UCL50CB		60561
UCL50CBP		60561
UCL55CB		60561
UCL55CBP		60561
UCL65CB	60411	
UCL65CBP	60411	
UL53CB	45821	
UL53CBP	45821	
UL95CB	60271	
UL95CBP	60271	

Wire Sizes

No matter what the variety, it's critical to choose the correct wire size for the application. The key information required is the length of wire needed, often referred to as the length of run, and the current load that the conductor is expected to carry in use. Knowing the "length and load" characteristics will take the guesswork out of the choice.

Voltage drop, caused by current draw, is the primary consideration when selecting the proper conductor size. Every conductor has a certain amount of resistance per foot. The longer the distance, the greater the resistance in the circuit. The greater the resistance, the higher the voltage drop caused by the same current. This relationship is defined by ohms law (Voltage = Current X Resistance). As distance from the power source

increases, there is less voltage available to "push" the current through the wire. Thus causes the current to drop. There is also heat buildup as the resistance increases, which also lessens the amount of current flow.

In low voltage systems, such as vehicles, even a small drop in voltage can have a serious effect on the amount of light a lamp puts out. But there's a simple solution. As you get further away from the power source, make the conductor larger. A larger conductor means less resistance.

Using the "Wire Size Chart", first find the load in amps on the left-hand edge of the chart. Then find the length of run across the top of the chart. Read down that column until it intersects with the amp load line. The point at which they cross indicates the correct wire size for the job.

Wire Size Chart											
12V (AMP)	6V (AMP)	Length of Wire (most distant light)									
		10'	20'	30'	40'	50'	60'	70'	80'	90'	100'
Load in Amps	Load in Amps	Wire Gauge	Wire Gauge	Wire Gauge	Wire Gauge	Wire Gauge	Wire Gauge	Wire Gauge	Wire Gauge	Wire Gauge	Wire Gauge
1	0.5	18	18	18	18	18	18	18	18	18	18
1.5	0.75	18	18	18	18	18	18	18	18	18	18
2	1	18	18	18	18	18	18	18	16	16	16
3	1.5	18	18	18	18	18	16	16	16	14	14
4	2	18	18	18	16	16	16	14	14	14	12
5	2.5	18	18	18	16	14	14	14	12	12	12
6	3	18	18	16	16	14	14	12	12	12	10
7	3.5	18	18	16	14	14	12	12	12	12	10
8	4	18	16	16	14	12	12	12	10	10	10
10	5	18	16	14	12	12	12	10	10	10	10
11	5.5	18	16	14	12	12	10	10	10	10	8
12	6	18	16	14	12	12	10	10	10	8	8
15	7.5	18	14	12	12	10	10	10	8	8	8
18	9	16	14	12	10	10	8	8	8	8	8
20	10	16	12	12	10	10	8	8	8	8	6

- A) DETERMINE THE TOTAL WIRE LENGTH FROM THE POWER SOURCE TO THE MOST DISTANT POINT IN THE CIRCUIT.
 B) DETERMINE THE TOTAL ELECTRICAL LOAD ON THE CIRCUIT.
 C) FIND THE LOAD ALONG ONE EDGE OF THE CHART (6V OR 12V) DEPENDING ON THE VEHICLE VOLTAGE IN QUESTION, TAKING THE NEXT HIGHER LOAD IF THE INDICATED LOAD FALLS BETWEEN TWO POINTS ON THE CHART.
 D) FIND THE CABLE LENGTH REQUIRED ON THE TOP OF THE CHART, TAKING THE NEXT HIGHER LENGTH (IF EXACT LENGTH IS NOT CITED).
 E) AT THE INTERSECTION OF THE LENGTH AND LOAD COLUMN, READ THE MINIMUM SIZE WIRE REQUIRED FOR THAT PARTICULAR CIRCUIT.

Wire Gauges

Conductors may be single strand or a group of strands. Stranded conductors are preferred in heavier gauges because they are more flexible and easier to work with than a comparable single strand conductor.

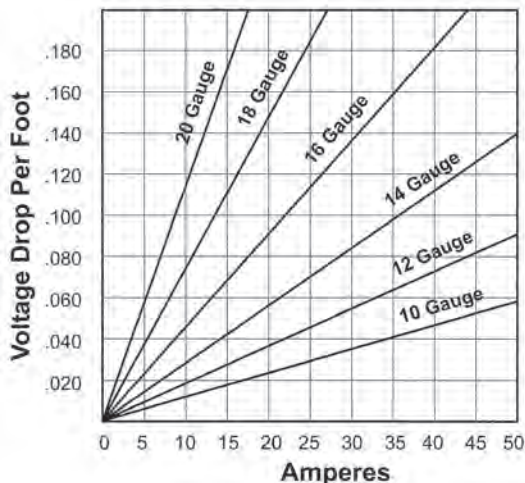
Comparing stranded cable sizes is simple. Stranded cable is compared using a numerical system. For example, 18/24 indicates that the conductor consists of 18 strands of 24-gauge wire. Similarly 12/12 refers to 12 strands of 12-gauge wire.

Gauge refers to the size of the conductor in a wire. The higher the gauge number, the smaller the wire. For example, an 18-gauge wire is smaller than a 12-gauge wire. And a 4-gauge wire has more than twice the diameter of a 10-gauge wire.

When the wire size gets larger, the number reaches #0 gauge or 1/0 (one aught). Additional zeros refer to larger sizes. The next larger size above 1/0 is #00 or 2/0 (two aught).

The capacity of a wire reflects the ability it has to carry electrical current. For example, over a distance of 50 feet, a 12-gauge wire can safely carry 10 amps. Over the same distance a 16-gauge wire can carry 3 amps. Choosing the size wire is made easier using a wire size chart.

Just remember the thicker the wire, the smaller the amperage loss.



Wire Gauge Chart

GAUGE	S.W.G.	A.W.G. (inches)	A.W.G. (mm)	Actual Size (A.W.G.)
00	0.348	0.368	9,266	●
0	0.324	0.325	8,252	●
1	0.300	0.289	7,348	●
2	0.276	0.258	6,543	●
3	0.252	0.229	5,827	●
4	0.232	0.204	5,189	●
5	0.212	0.182	4,621	●
6	0.192	0.162	4,115	●
7	0.176	0.144	3,665	●
8	0.160	0.129	3,264	●
9	0.144	0.114	2,906	●
10	0.128	0.102	2,588	●
11	0.116	0.091	2,304	●
12	0.104	0.081	2,052	●
13	0.092	0.072	1,829	●
14	0.080	0.064	1,628	●
15	0.072	0.057	1,450	●
16	0.064	0.051	1,291	●
17	0.056	0.045	1,150	●
18	0.048	0.040	1,024	●
19	0.040	0.036	0,912	●
20	0.036	0.032	0,813	●
21	0.032	0.029	0,724	●
22	0.028	0.025	0,643	●

A.W.G. = American Wire Gauge

S.W.G. = Imperial Standard Wire Gauge

(British legal standard)

IMPORTANT NOTE: Every lamp, reflex reflector, and conspicuity treatment must be permanently attached in the location specified below and must comply with all applicable requirements prescribed for it by FMVSS/CMVSS 103. The face of any device on the front/rear and sides should be, respectively perpendicular and parallel to the vehicle's centerline, unless it is photometrically certified at installation angle. No part of the vehicle shall prevent any device from meeting its prescribed requirements unless an auxiliary device meeting all prescribed requirements is installed.

IN CANADA: Manufacturers and importers of vehicles must have the proper certification test records demonstrating compliance of lighting components with all prescribed requirements.

BASIC EQUIPMENT REQUIRED ON ALL TRAILERS

DESCRIPTION				MANDATORY REQUIREMENTS			
Area	Equipment	SAE Lens Coding	Functional Purpose	Quantity	Color	Location	Height mm(in.) from the ground
1	Tail Lamps	(T)	Indicate vehicle's presence and width	Minimum 2	Red	On the rear - symmetrical as far apart as practicable	380-1030 (15-73)
	Stop Lamps	(S)	Indicate braking	Minimum 2	Red	On the rear - symmetrical as far apart as practicable	380-1030 (15-72)
	Rear Turn Signal Lamps	(R)	Indicate direction of turn	Minimum 2	Red or Amber	On the rear - symmetrical as far apart as practicable	380-2110 (15-83)
	Rear Reflex Reflectors	(A)	Indicate vehicle's presence and width	Minimum 2	Red	On the rear - symmetrical as far apart as practicable facing rearward	380-1030 (15-83)
2	License Plate Lamp(s)	(L)	Illuminated license plate	Minimum 1	White	On the rear - above or at the sides of license plate	No requirement
3	Rear Side Marker Lamps <small>(photometrically certified at installation angle)</small>	(P2, PC* or P3, PC2*)	Flare and rear side marker lamps / side reflex reflectors indicate vehicle's presence and length	Minimum 2	Red	Each side at rear as far back as practicable	380-1530 (15-40) to rear, for use unless 2032mm (80") wide
	Rear Side Reflex Reflectors	(R)		Minimum 2	Red	Each side at rear as far back as practicable facing sideward	380-1030 (15-80)
4	a Front Side Marker Lamps <small>(photometrically certified at installation angle)</small>	(P2, PC* or P3, PC2*)	Flare and rear side marker lamps / side reflex reflectors indicate vehicle's presence and length	Minimum 2	Amber	Each side at front as far forward as practicable	380 (15) minimum
	b Front Side Reflex Reflectors	(A)		Minimum 2	Amber	Each side at front as far forward as practicable facing sideward	380-1530 (15-80)

ADDITIONAL EQUIPMENT FOR TRAILERS EXCEEDING THE FOLLOWING PARAMETERS

Length 9.1m (30 ft.) or longer

DESCRIPTION				MANDATORY REQUIREMENTS			
Area	Equipment	SAE Lens Coding	Functional Purpose	Quantity	Color	Location	Height mm(in.) from the ground
5	a Intermediate Side Marker Lamps <small>(photometrically certified at installation angle)</small>	(P2, P3, PC* or PC2*)	Indicate presence of a long vehicle	Minimum 2	Amber	Each side near center facing sideward	380 (15) minimum
	b Intermediate Side Reflex Reflectors	(A)	Indicate presence of a long vehicle	Minimum 2	Amber	Each side near center facing sideward	380-1530 (15-80)

Width 2032mm (80 in.) or wider

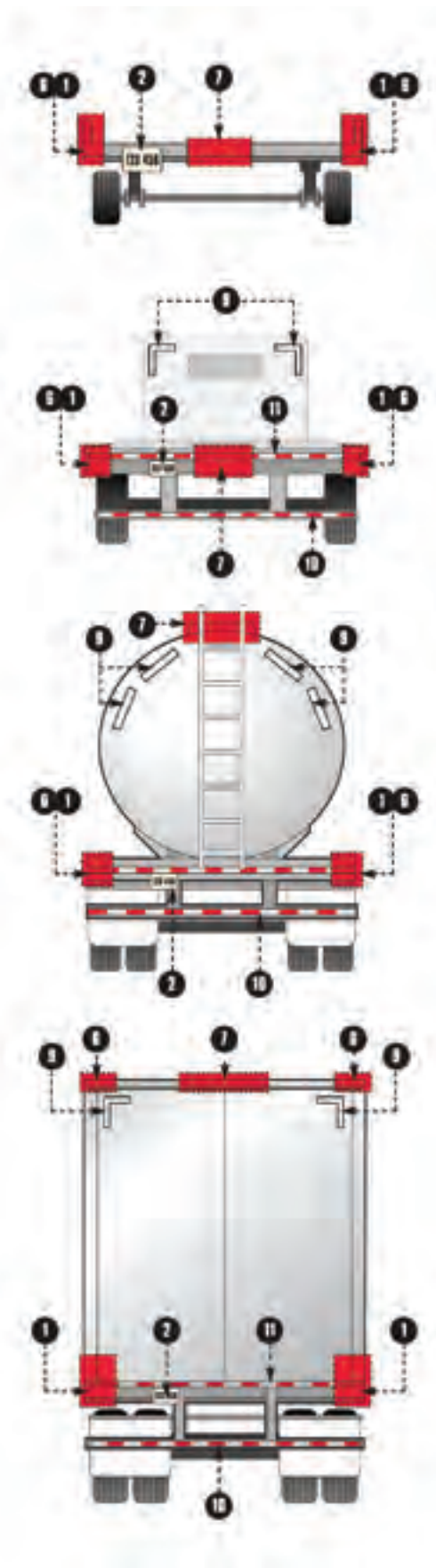
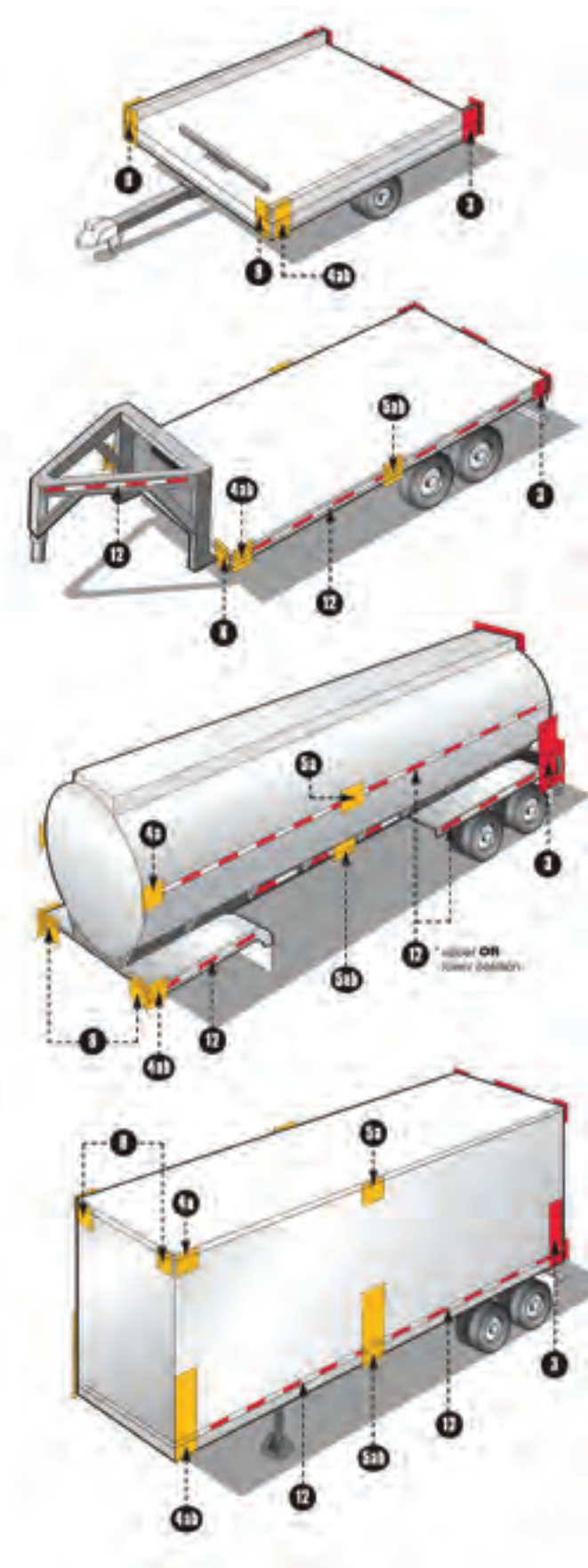
DESCRIPTION			MANDATORY REQUIREMENTS				
Area	Equipment	SAE Lens Coding	Functional Purpose	Quantity	Color	Location	Height
6	Rear Clearance Lamps <small>(photometrically certified at installation angle)</small>	(P2, PC* or P3, PC2*)	Show vehicle's width. MAY NOT be combined with tail lamps	Minimum 2	Red	At widest point - symmetrical on the rear or near the rear facing rearward	As high as practicable, may be lower only if clearance area at the top
7	Rear Identification (ID) Lamps	(P2 or P3)	Indicate presence of a wide vehicle	Exactly 2	Red	On the rear - center horizontally spaced 150mm (6 in.) to 300mm (12 in.) apart facing rearward	At the top, may be lower if door height narrower than 25mm
8	Front Clearance Lamps <small>(photometrically certified at installation angle)</small>	(P2, PC* or P3, PC2*)	Show vehicle's width	Minimum 2	Amber	At widest point - symmetrical on the front or near the front facing forward	As high as practicable

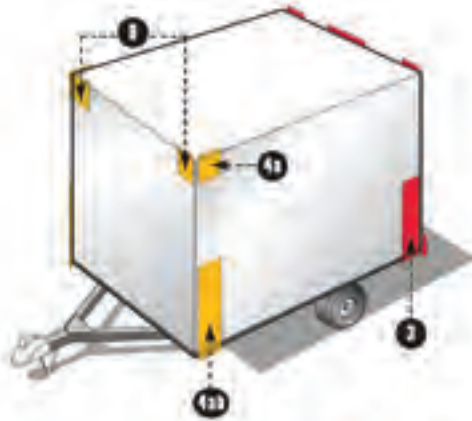
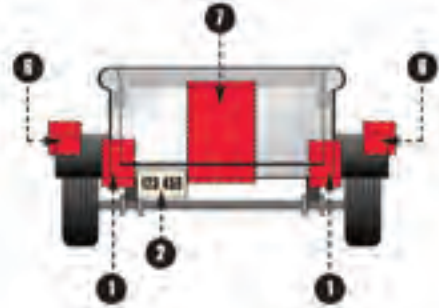
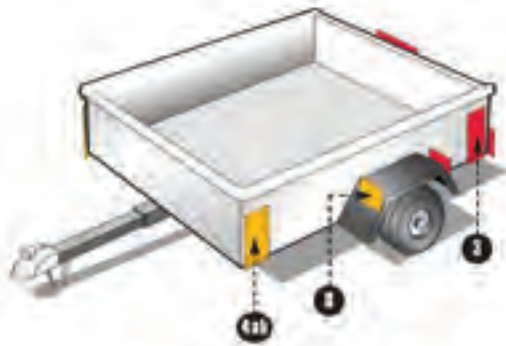
Width 2032mm (80 in.) or wider AND GVWR 4536 kg (10,000 lb.) or more

DESCRIPTION		MANDATORY REQUIREMENTS					
Area	Conspicuity Treatment	DOT Coding	Quantity	Color	Location	Height	Options
9	Rear Upper Body Markings		Exactly 2 pairs of 300mm long strips	White	On the rear upper corners facing rearward	At the top	Flare markings may not be required if they are included in that required location with conspicuity treatment.
10	Bumper Bar Marking		Continuous	Red/White	On the rear bumper bar's top edge between full width - facing rearward	No requirement	
11	Rear Lower Body Marking		Continuous	Red/White (see options)	On the rear full width of the vehicle facing rearward	As horizontal as practicable and as close as possible to the range of 375 to 1525mm from the ground	Optional in Canada. Rear lower body and side conspicuity treatment may also be solid white, solid yellow, or white and yellow.
12	Side Marking		(see locations)	Red/White (see options)	Each side - facing sideward continuous or evenly spaced over maximum of 80% of length start and end as close to the front and rear of the vehicle as practicable	As horizontal as practicable and as close as possible to the range of 375 to 1525mm from the ground	

NOTE: The edge of red conspicuity tape shall not be closer than 75 mm to the edge of any amber lens and the edge of white conspicuity tape shall not be closer than 75 mm to the edge of any lamp.

For more information contact: Transport Canada, Motor Vehicle Safety Enforcement Branch Attention: Compliance Engineering Fax: 613-998-4831
National Highway Traffic Safety Administration: Office of Safety Performance Standards Attention: Richard Van Idersine Fax: 202-366-4329





IMPORTANT NOTE: Every lamp, reflex reflector, and conspicuity treatment must be permanently attached in the location specified below and must comply with all applicable requirements prescribed for it by FMVSS/CMVSS 108. The face of any device on the front/rear and sides should be, respectively perpendicular and parallel to the vehicle's centerline, unless it is photometrically certified at installation angle. No part of the vehicle shall prevent any device from meeting its prescribed requirements unless an auxiliary device meeting all prescribed requirements is installed.

IN CANADA: Manufacturers and importers of vehicles must have the proper certification test records demonstrating compliance of lighting components with all prescribed requirements.

BASIC EQUIPMENT REQUIRED ON ALL TRUCKS, BUSES & MPVs

DESCRIPTION				MANDATORY REQUIREMENTS			
Area	Equipment	SAE Lens Coding	Functional Purpose	Quantity	Color	Location	Height mm(in.) from the ground
1	Headlamps - Lower Beam US requires "DOT" labeling on lens DSC/Crossed - light source code required on lens	(H, HR)	Forward road illumination	Minimum 2	White	On the front - symmetrical as far apart as practicable If 4 lamp system - inboard of above upper beam.	960-1370 (22-54)
	Headlamps - Upper Beam US requires "DOT" labeling on lens DSC/Crossed - light source code required on lens	(H, HR)	Forward road illumination	Minimum 2	White	On the front - symmetrical as far apart as practicable If 4 lamp system - inboard or below lower beam.	960-1370 (22-54)
	Parking Lamps Vehicles less than 3000mm wide	(P)	Industry/yard vehicle	Minimum 2	White or amber	On the front - symmetrical as far apart as practicable	980-1630 (15-72)
	Daytime Running Lamps (DRL) Canada - required / US - optional US requires "DOT" labeling on lens if not necessary	(Y2)	Indicate in use vehicle	Minimum 2	White or amber	On the front - symmetrical as far apart as practicable	380 (15) min. Max depends on type of DRL
	Front Turn Signal Hazard Warning Lamps	(T)	Indicate direction of turn Identify disabled vehicle	Minimum 2	Amber	On the front - symmetrical as far apart as practicable	380-2110 (15-85)
2	Front Clearance Lamps Vehicles 2000mm wide or wider Photometrically certified at installation angle	(P2, PC ¹ or P3, PC ²)	Show vehicle's width	Minimum 2	Amber	At widest point - symmetrical on the front or rear of the front facing forward	As high as practicable
3	Front Identification Lamps (ID) Vehicles 2000mm wide or wider	(P2 or P3)	Indicate presence of a wide vehicle	Exactly 2	Amber	On the front - center horizontally spaced 150mm (6 in.) to 300mm (12 in.) apart	As high as practicable or on top of the cab
4	a Front Side Marker Lamps Photometrically certified at installation angle	(PS, PC ¹ , P3, PC ²)	Front and rear side marker lamps / side reflex reflectors indicate vehicle's presence and length	Minimum 2	Amber	Each side at front as far forward as practicable	380 (15) minimum
	b Front Side Reflex Reflectors	(A)		Minimum 2	Amber	Each side at front as far forward as practicable facing outward	380-1530 (15-60)
5	a Rear Side Marker Lamps Photometrically certified at installation angle	(PR, PC ¹ or P3, PC ²)	Rear and front side marker lamps / side reflex reflectors indicate vehicle's presence and length	Minimum 2	Red	Each side at rear as far back as practicable	380 (15) minimum
	b Rear Side Reflex Reflectors ** ** not required on truck trailers	(A)		Minimum 2	Red	Each side at rear as far back as practicable facing outward	380-1530 (15-60)
6	Rear Clearance Lamps Vehicles 2000mm wide or wider US required on Truck Trailers Photometrically certified at installation angle	(P2, PC ¹ or P3, PC ²)	Show vehicle's width MAY NOT be combined with tail lamps	Minimum 2	Red	At widest point - symmetrical on the rear or rear of the rear facing rearward	As high as practicable may be lower only if rear ID lamps are at the top
7	Rear Identification (ID) Lamps Vehicles 2000mm wide or wider US required on Truck Trailers	(P2 or P3)	Indicate presence of a wide vehicle	Exactly 2	Red	On the rear - center horizontally spaced 150mm (6 in.) to 300mm (12 in.) apart facing rearward	As high as practicable may be lower if door height restriction than 250mm
8	Tail Lamps	(T)	Indicate vehicle's presence and width	Minimum 2	Red	On the rear - symmetrical as far apart as practicable	380-1630 (15-72)
	Stop Lamps	(S)	Indicate braking	Minimum 2	Red	On the rear - symmetrical as far apart as practicable	380-1630 (15-72)
	Rear Turn Signal Hazard Warning Lamps	(T)	Indicate direction of turn Identify disabled vehicle	Minimum 2	Red or amber	On the rear - symmetrical as far apart as practicable	380-2110 (15-85)
	Rear Reflex Reflectors	(A)	Show vehicle's presence and width	Minimum 2	Red	On the rear - symmetrical as far apart as practicable	380-1530 (15-60)
9	Backup Lamp	(R)	Illuminates ground behind the vehicle and alert road users	Minimum 1	White	Rear	No requirement
10	License Plate Lamp(s)	(L)	Illuminates license plate	Minimum 1	White	On the rear - above or at the sides of license plate	No requirement
11	Corner High Mounted Stop Lamp Vehicles less than 2000mm wide and 4500kg	(U2)	Indicates braking	1	Red	On the rear - corners of the vehicle	960 (24) minimum

ADDITIONAL EQUIPMENT FOR SPECIFIC VEHICLES VEHICLES 9.1m (30 ft.) LONG OR LONGER

DESCRIPTION				MANDATORY REQUIREMENTS			
Area	Equipment	SAE Lens Coding	Functional Purpose	Quantity	Color	Location	Height mm(in.) from the ground
12	a Intermediate Side Marker Lamps	(P2 or P3)	Indicate presence of a long vehicle	Minimum 2	Amber	Each side rear center	380 (15) minimum
	b Intermediate Side Reflex Reflectors	(A)	Indicate presence of a long vehicle	Minimum 2	Amber	Each side rear center facing sideward	380-1530 (15-60)

Truck Tractors

DESCRIPTION		MANDATORY REQUIREMENTS					
Area	Conspicuity Treatment	DOT Coding	Quantity	Color	Location	Height	Options
13	Rear Upper Body Markings	DOT C DOT C3 DOT C3 DOT C4	Exactly 2 pairs of 300mm long stripe	White	Near upper corners of cab facing rearward	As high as practicable avoiding hinges	
14	Rear Marking		Exactly 2 sections of min. 300mm each	Red White	Rear - facing rearward - on kneecaps or mud flap brackets, or within 300mm below the top of mud flaps	As horizontal as practicable and not higher than 1625mm from the ground	If mud flaps not used - on the cab or fenders mounted brackets

NOTE: The edge of red conspicuity tape shall not be closer than 75 mm to the edge of any amber lamp and the edge of white conspicuity tape shall not be closer than 75 mm to the edge of any lamp

For more information contact:

National Highway Traffic Safety Administration, Office of Safety Performance Standards
Transport Canada, Motor Vehicle Safety Enforcement Branch

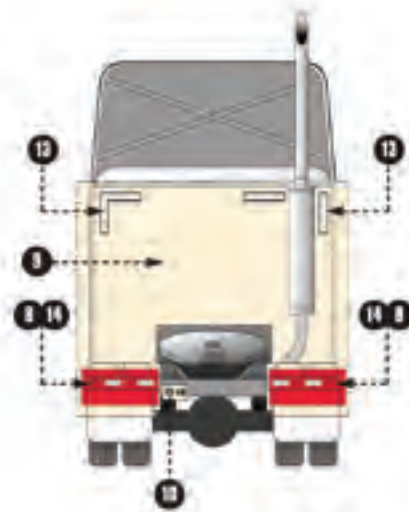
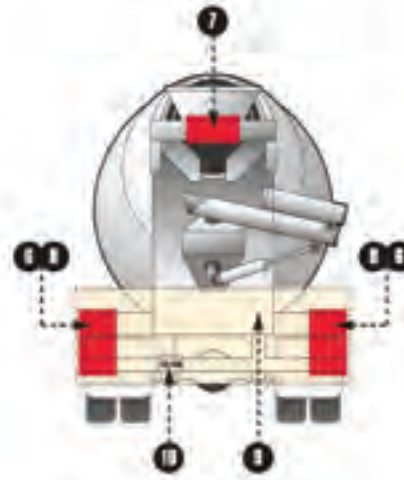
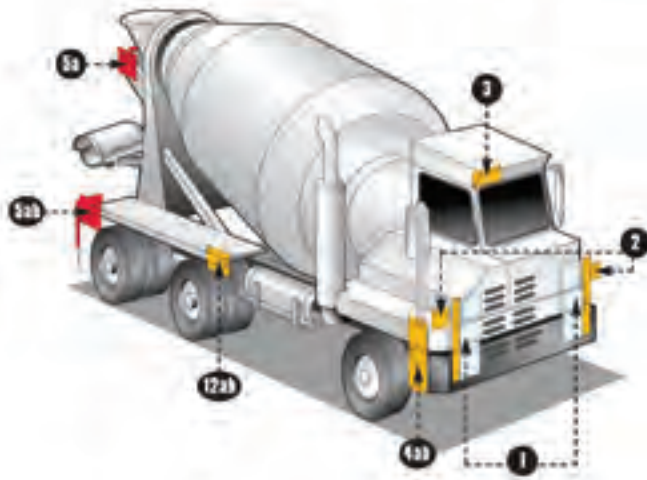
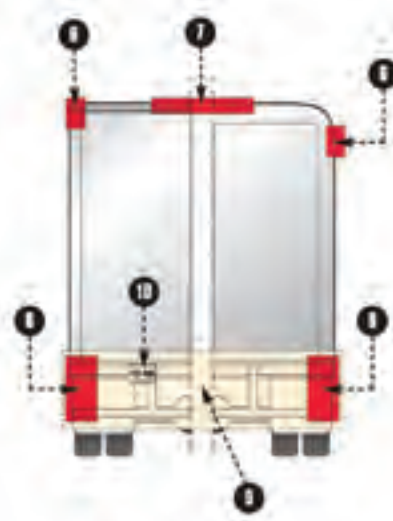
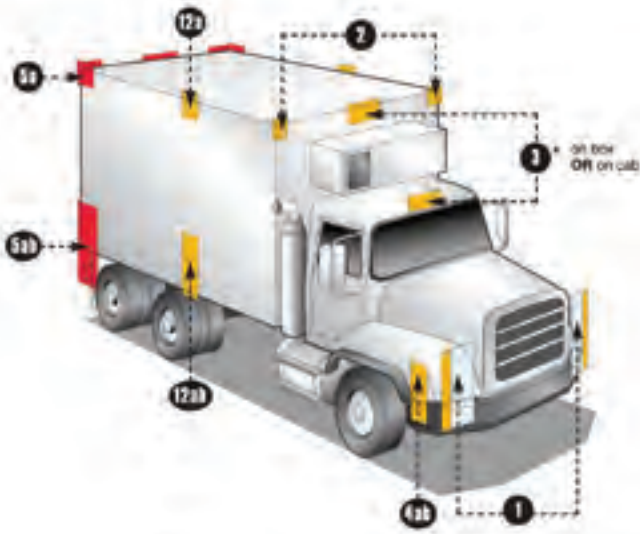
Attention: Richard Van Marising
Attention: Compliance Engineering

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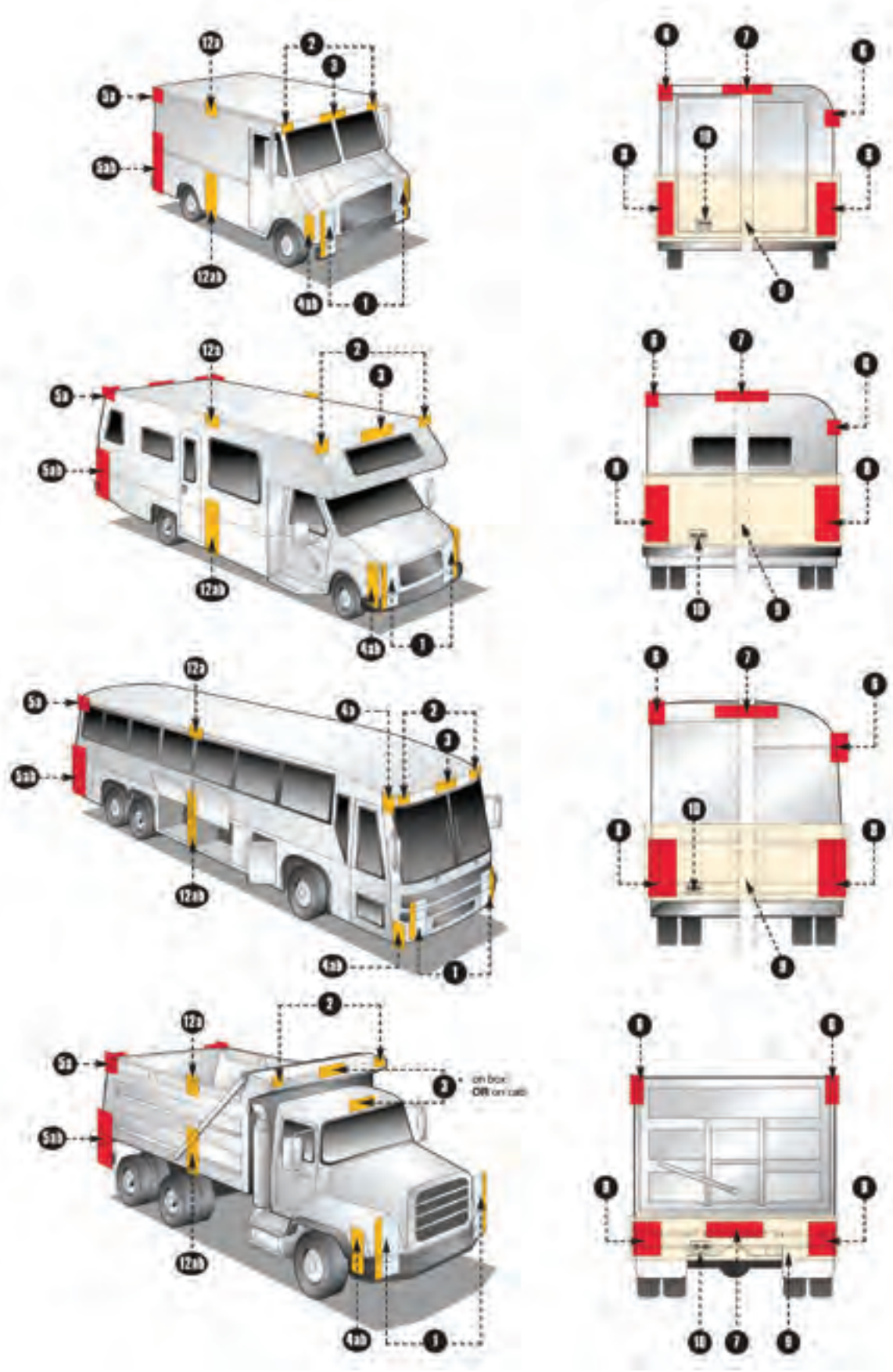
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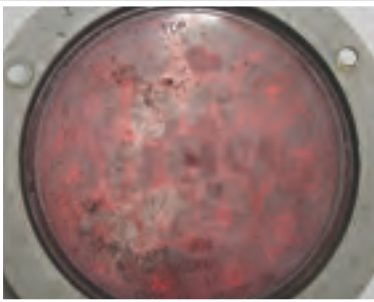
9 Common Causes of Failure



VIBRATION

Broken lamp filaments are one of the most common problems caused by vibration, but they also can lead to the abrasion of mating surfaces, which cause connectors and splices to fail.

To minimize vibration problems, make certain that all wires and connectors are secured appropriately. Always secure the wiring as it exits the connector. Use cushioned mountings for lamps in applications where vibration is excessive.

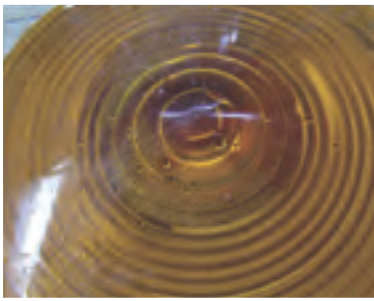


MOISTURE AND CORROSION

Condensed water droplets inside a lens or corrosion around a lamp socket are sure signs that moisture has penetrated the system.

Water can enter the system through ineffective wire seals, unprotected splices, unsealed crimps and connectors and non-mating seals.

When making repairs, don't replace a sealed system with unsealed components. Make certain that connector seals are in place and undamaged. Inspect them carefully for cuts, tears and punctures.

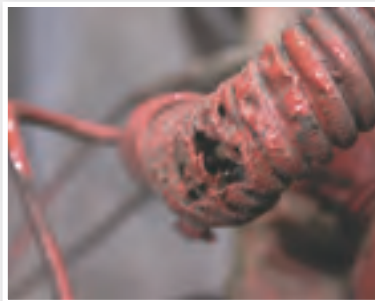


CHEMICAL DAMAGE

Continuous exposure to many of the common chemicals found in and around trucks can cause plastics to swell, crack, soften or otherwise become degraded. Diesel fuel and hot engine oil are the main culprits.

To minimize the effects of chemicals, inspect the wiring for signs of degradation. If it is occurring in an area that is generally free of contamination, check for leaky hoses, gaskets or fittings and repair if damaged or leaking.

To avoid damage from chemicals, don't run wiring in areas where the chance for continuous exposure is likely, such as under fuel lines and filters.

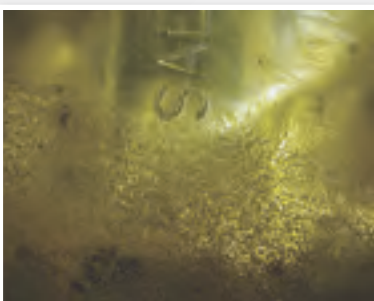


ABRASION

Abrasion occurs when wires or wire wraps are allowed to run against frame members or other abrasive surfaces. Once the insulation is worn away, bare conductors may contact a ground surface and create a grounded circuit. Or, it could cause wear to the point of fracture resulting in an open circuit.

Using the proper routing and coverings will help to prevent wear areas and abrasive damage.

Worn coverings such as loom, convoluted tubing or spiral wrap should be replaced if they are no longer providing sufficient protection for the wires inside.



EXTREME TEMP

A variety of conditions lead to extreme temperature build-up that can damage lighting and wiring. These include leaving a trailer's tail lights on when the trailer is backed up to a dock and airflow around the lights is prohibited.

When lights have been damaged from heat buildup, the lenses are often bubbled and misshapen. Where extreme temperatures can't be avoided, special heat-resistant wires and materials should be used.

in Truck Wiring and Lighting



IMPACT

Lighting and wiring must be protected from the impact of rocks, gravel and other road debris. A major impact can cause enough damage to require extensive repairs. Smaller, more frequent impacts over time may deliver equally extensive damage. Damage from impacts can cause problems although the wires are contained in a loom or other covering. During inspection, always check for damage from impacts and replace any wiring or lights that appear to be damaged. Make certain that the replacement parts are equivalent to or better than the original.



FLEXING

Wiring in a truck often must make sharp turns around corners, as well as subjected to constant flexing where doors or hoods are opened and closed repeatedly.

To prevent wire damage from repeated flexing, avoid tight radius turns. Make sure that the wire is not snagged or stressed at its maximum extension. Also, make certain that the wire moves smoothly through its flexing cycle and doesn't rub or scrape against adjacent components.



TENSILE LOADS

Wiring should not be considered an appropriate load-bearing component. It's easy to exceed the designed load limit by inadvertently installing wires under tension or snagging a section of wire on one of the moving parts. Using a wire bundle as a handhold or step can destroy the integrity of the conductor and its connections. So can the weight of accumulated ice, snow, mud and other materials.

Each of these points must be considered carefully when routing wires in a wiring harness.



GRIT AND SAND

Accumulation of abrasive materials can lead to damage, especially when combined with vibration. If gritty materials enter connections, they can accelerate the wear on contact points causing interruption of the circuit and failure of devices. Sand and grit also can attract and hold moisture, creating conditions conducive to corrosion. In some cases, sand and grit may work their way inside protective coverings and abrade the insulation of wires running through them if there is relative motion between the covering and the wire.

One of the ways of reducing sand and grit buildup is to eliminate abrasive materials in the areas where wiring is present. Another way is to seal openings on protective coverings to keep gritty materials from entering.

For more information, visit www.grote.com

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A family's multi-generational commitment to the vehicle and transportation lighting industry.



**William D. Grote, Founder
Grote Industries 1901**

can't help but see the past, present and future of the lighting industry in a different context from those who simply find themselves working in the lighting business.

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As a corporation, our family's culture extends to our entire organization, around the globe and particularly to our customer-facing staff. Grote is not sales oriented, we're not engineering oriented – we're relationship oriented and we're working hard every day to uphold our reputation and continue to earn your trust.

The Grote family has played a prominent role in shaping the vehicle lighting industry. We are deeply and personally engaged today, as we will be in the future, to make the kind of brave choices and bold decisions that will help move the vehicle lighting industry ahead and into an even brighter tomorrow.

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