

INSTRUCTIONS FOR INSTALLATION
OF CONVOY WARNING LIGHT KIT

NOTE

1 THIS DRAWING IS FOR INSTALLATION PURPOSES ONLY
ALL ITEMS MARKED ★ ARE INCLUDED IN KIT.

2 CALLOUTS IDENTIFIED AS FOLLOWS:

★ NEW PARTS

PARTS TO BE REMOVED AND DISCARDED

△ PARTS TO BE REMOVED AND REUSED

SECTION I. INTRODUCTION

1-1 PURPOSE THE PURPOSE OF THESE INSTRUCTIONS IS TO PROVIDE A
PROCEDURE FOR INSTALLATION OF CONVOY WARNING LIGHT KIT ON
THE 2-1/2-TON M44A2 AND 5-TON M39, M39A1, M39A2, M809, AND M939
SERIES VEHICLES (EXCEPT 2-1/2 AND 5-TON DUMP BODY VEHICLES AND
5-TON VAN BODY VEHICLES).

SECTION II. INSTALLATION KIT

2-1 NEW MATERIAL INSTALLATION KIT 12301057 CONTAINS THE FOLLOW-
ING ITEMS:

PART NO.	NOMENCLATURE	QTY.
425648	SCREW	2
5381088	LEVER	1
7059461	BRACKET	1
7409993	PLATE	1
11603677	U-BOLT	4
12296577-1	CORD ASSEMBLY	2
12296642	PLATE, MTG.	2
12301058	INSTALLATION DRAWING	1
12301082	PLATE, MTG.	2
12301063	BRACKET ASSEMBLY	2
12301084	TUBE, SUPPORT	2
12301066	U-BOLT	2
12301067	TUBE, SUPPORT	2
12301084	LIGHT, WARNING	2
12301085	CONVOY HARNESS ASSEMBLY	1

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE AMG L6633		
A	(1)REV NOTE I-1 (AMG L8249)	2-27-85	CCE PWW

PART NO.

INTERPRET DRAWING IN ACCORDANCE WITH
STANDARDS PRESCRIBED BY DOD-STD-100

M342A2	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	CONTRACT NUMBER DAAE07-81-C-5691	U.S. ARMY TANK AUTOMOTIVE COMMAND WARREN, MICHIGAN 48090	
M109A3	TOLERANCES ON 2 PLACES 3 PLACES ANGLES ± ± ±	CONTRACTOR AM General Corp. DETROIT, MICHIGAN	INSTRUCTIONS FOR INSTALLATION OF CONVOY WARNING LIGHT KIT	
M185A3	MATERIAL	DRAWN BY <i>D. Taylor</i>	DATE <i>10-28-84</i>	
M939 SERIES		CHECKED <i>W. Smith</i>	ENGINEER <i>K. Austin</i>	
M809 SERIES		DRAWING APPROVAL <i>D. K. Williams</i>		
M39 SERIES		DESIGN APPROVAL <i>Samuel H. H. H.</i>		
M44A2 SERIES				
12301057				
SEE ENGINEERING RECORDS			SIZE B	CODE IDENT NO. 19207
NEXT ASSY	USED ON		DRAWING NO. 12301086	
APPLICATION			SCALE	UNIT WT.
				SHEET 1 OF 5

INTERPRET DRAWING IN ACCORDANCE WITH
STANDARDS PRESCRIBED BY DOD-STD-100

12301086
12301087
MS3367/1-9
MS3367/3-9
MS21044-N3
MS21333-101
MS21333-122
MS27183-10
MS27183-12
MS27183-14
MS27183-18
MS35207-261
MS35335-36
MS39060-2
MS51922-1
MS51922-13
MS51922-21
MS51922-37
MS90726-65
MS90726-110

INSTALLATION DRAWING
CABLE ASSEMBLY
TIEDOWN STRAP
TIEDOWN STRAP
NUT
CLAMP
CLAMP
WASHER
WASHER
WASHER
WASHER
SCREW
WASHER
SWITCH
NUT
NUT
NUT
NUT
SCREW
SCREW

1
1
15
6
2
2
2
2
4
4
10
2
2
1
2
4
2
10
2
2

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON 2 PLACES 3 PLACES ANGLES ± ± ±		CONTRACT NUMBER DAAEC7-81-C-5691 CONTRACTOR AM General Corp. <small>DETROIT MICHIGAN</small>		U.S. ARMY TANK AUTOMOTIVE COMMAND WARREN, MICHIGAN 48090	
		MATERIAL		DRAWN BY <i>B. Taylor</i> CHECKER <i>P. White</i>		INSTRUCTIONS FOR INSTALLATION OF CONVOY WARNING LIGHT KIT	
		M939 SERIES M809 SERIES M39 SERIES M44A2 SERIES		DATE <i>6-28-54</i> ENGINEER <i>K. Austin</i>		DRAWING NO. 12301086	
12301057		SEE ENGINEERING RECORDS		DRAWING APPROVAL <i>H. H. ...</i>		SIZE B	
NEXT ASSY		USED ON		DESIGN APPROVAL <i>Lawrence ...</i>		CODE IDENT. NO. 19207	
APPLICATION		MATERIAL ENGINEERING				SCALE	
						UNIT WT.	
						SHEET 2	

2-2. EXISTING MATERIAL. ALL MATERIAL REMOVED AND NOT REUSED DURING INSTALLATION WILL BE RETURNED TO STOCK FOR DISPOSITION IN ACCORDANCE WITH AR 725-50.

2-3. VEHICLE PREPARATION.

A. DISCONNECT BATTERY GROUND CABLES

SECTION III. INSTALLATION PROCEDURES

3-1. SWITCH PLACEMENT AND WIRING.

NOTE

FOR M936 WRECKER ONLY, USE STEP A. AND OMIT STEPS B AND C. ON REMAINING M939 SERIES, USE EXISTING HOLES IN INSTRUMENT PANEL AND START WITH STEP C. ON ALL OTHER VEHICLE APPLICATIONS START WITH STEP B.

A. REMOVE EXISTING WARNING LIGHT SWITCH FROM MOUNTING BRACKET ON INSTRUMENT PANEL REMOVE TERMINAL #180 AND #181 FROM SWITCH.

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PART NO.

- B. USING 7059461 BRACKET AS A TEMPLATE, LOCATE, MARK, AND DRILL TWO 0.219-INCH DIAMETER HOLES IN INSTRUMENT PANEL AS SHOWN ON SHEET 4, FIGURE 6.
- C. SECURE BRACKET TO INSTRUMENT PANEL USING TWO MS35207-261 SCREWS AND MS21044-N3 NUTS.
- D. PUSH 16A SINGLE TERMINAL END OF 12301087 CABLE ASSEMBLY THROUGH GROMMET IN FIREWALL AS SHOWN ON SHEET 3, ZONE G-7 (GROMMET MAY HAVE TO BE UNBOLTED TO FEED CABLE THROUGH). PLUG TERMINAL INTO PIN "A" OF MS39060-2 SWITCH.
- NOTE
- REMOVE SPLASH SHIELD ON M939 SERIES VEHICLES.
- E. ROUTE POWER CABLE ALONG FRONT HARNESS TO DIMMER SWITCH. REMOVE TERMINAL FROM PIN 16 ON DIMMER SWITCH AND CONNECT ONE 16A TERMINAL INTO PIN 16 AND THE OTHER 16A TERMINAL INTO WIRE REMOVED FROM PIN 16.
- F. PUSH 16B SINGLE TERMINAL END OF 12301085 CONVOY HARNESS ASSEMBLY THROUGH GROMMET AS IN STEP D. AND PLUG TERMINAL INTO PIN "B" OF SWITCH. ON M936 WRECKER, PLUG TERMINAL #180 INTO PIN "C" OF SWITCH AND TERMINAL #181 INTO PIN "D" OF SWITCH.
- G. ATTACH SWITCH AND 7409993 PLATE TO BRACKET WITH NUT AND WASHER SUPPLIED. ATTACH 5381088 LEVER TO SWITCH WITH SCREW SUPPLIED AS SHOWN ON SHEET 4, ZONE G-5.
- H. ROUTE CONVOY HARNESS ASSEMBLY ALONG EXISTING FRONT HARNESS TO REAR OF CAB. SECURE CONVOY HARNESS AND CABLE ASSEMBLY WITH MS3367/1-9 TIEDOWN STRAPS, APPROXIMATELY 10" APART, AS SHOWN ON SHEET 3, FIGURE 3. (REPLACE BOLT IN FIREWALL GROMMET IF REMOVED).
- I. ROUTE LONGER HARNESS WIRE ACROSS REAR CAB CROSSMEMBER AND SECURE WITH MS3367/3-9 TIEDOWN STRAPS AS SHOWN ON SHEET 4, FIGURE 5.
- J. INSTALL SPLASH SHIELD ON M939 SERIES VEHICLES.

INTERPRET DRAWING IN ACCORDANCE WITH
STANDARDS PRESCRIBED BY DOD-STD-100

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: 2 PLACES 3 PLACES ANGLES ± ± ±		CONTRACT NUMBER DAAE07-81-C-5691		U.S. ARMY TANK AUTOMOTIVE COMMAND WARREN, MICHIGAN 48090	
		MATERIAL		CONTRACTOR AM General Corp. DETROIT, MICHIGAN		INSTRUCTIONS FOR INSTALLATION OF CONVOY WARNING LIGHT KIT	
		M939 SERIES		DRAWN BY <i>[Signature]</i>		DATE 6-28-84	
		M809 SERIES		CHECKED BY <i>[Signature]</i>		ENGINEER <i>[Signature]</i>	
		M39 SERIES		DRAWING APPROVAL <i>[Signature]</i>		SIZE B	
12301057		M44A2 SERIES		DESIGN APPROVAL <i>[Signature]</i>		CODE IDENT. NO. 19207	
SEE ENGINEERING RECORDS						DRAWING NO. 12301086	
NEXT ASSY		USED ON				SCALE	
APPLICATION						UNIT WT.	
						SHEET 3	

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3-2 WARNING LIGHT INSTALLATION

NOTE

BOTH LEFT AND RIGHT SIDE WARNING LIGHTS ARE INSTALLED THE SAME WAY.

- A. REMOVE AMBER COVER FROM 12301084 WARNING LIGHT AND RE-MOVE THREE TOGGLE BOLTS.
- B. ASSEMBLE 12201062 MOUNTING PLATE TO 12296642 MOUNTING PLATE USING THREE TOGGLE BOLTS AND HARDWARE SUPPLIED WITH LIGHT AS SHOWN ON SHEET 1, FIGURE 1.
- C. FISH 12296577-1 CORD ASSEMBLY THROUGH 12301067 SUPPORT TUBE. CORD ASSEMBLY MUST BE STARTED FROM LARGER END OF TUBE. THE UNEVEN ENDS OF CORD ASSEMBLY MUST EXTEND THROUGH THREADED END OF TUBE. PUSH THE TERMINALS THROUGH MOUNTING PLATES ASSEMBLED IN STEP B. AND HAND TIGHTEN PLATES TO SUPPORT TUBE.
- D. USING MS21333-101 CLAMP, MS27183-10 WASHER, AND MS51922-1 NUT, ATTACH CORD ASSEMBLY TO TOGGLE BOLT AS SHOWN ON SHEET 3, FIGURE 4. CONNECT "POS" AND "GND" TERMINALS AND ASSEMBLE WARNING LIGHT TO MOUNTING PLATES WITH HARDWARE SUPPLIED WITH LIGHT AS SHOWN ON SHEET 3, FIGURE 4. INSTALL AMBER COVER REMOVED IN STEP A.
- E. IF VEHICLE HAS MACHINE GUN MOUNT, ELIMINATE STEP E ON M939 SERIES VEHICLES. SOME INSULATION ON INSIDE REAR OF CAB MAY HAVE TO BE REMOVED.
- F. MOUNT 12301064 LOWER SUPPORT TUBE TO CAB REAR GUN MOUNT BRACKET USING TWO 11609677 U-BOLTS, FOUR MS27183-18 WASHERS, AND MS51922-37 NUTS AS SHOWN ON SHEET 2, FIGURE 2.
- F. ATTACH 12301063 BRACKET ASSEMBLY WITH 12301066 U-BOLT, TWO MS27183-12 WASHERS, MS51922-13 NUTS, ONE MS90726-110 SCREW, MS27183-18 WASHER, AND MS51922-37 NUT TO LOWER SUPPORT TUBE AS SHOWN ON SHEET 2, FIGURE 2. OR ON SHEET 1, FIGURE 1, WHEN MOUNTING TO MACHINE GUN MOUNT POST.

NOTE

IF VEHICLE HAS MACHINE GUN MOUNT, ELIMINATE STEP E ON M939 SERIES VEHICLES. SOME INSULATION ON INSIDE REAR OF CAB MAY HAVE TO BE REMOVED.

- E. MOUNT 12301064 LOWER SUPPORT TUBE TO CAB REAR GUN MOUNT BRACKET USING TWO 11609677 U-BOLTS, FOUR MS27183-18 WASHERS, AND MS51922-37 NUTS AS SHOWN ON SHEET 2, FIGURE 2.
- F. ATTACH 12301063 BRACKET ASSEMBLY WITH 12301066 U-BOLT, TWO MS27183-12 WASHERS, MS51922-13 NUTS, ONE MS90726-110 SCREW, MS27183-18 WASHER, AND MS51922-37 NUT TO LOWER SUPPORT TUBE AS SHOWN ON SHEET 2, FIGURE 2. OR ON SHEET 1, FIGURE 1, WHEN MOUNTING TO MACHINE GUN MOUNT POST.

INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY DOD-STD-100

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON 2 PLACES 3 PLACES ANGLES ± ± ±		CONTRACT NUMBER DAAE07-81-C-5691 CONTRACTOR AM General Corp. DETROIT, MICHIGAN		U.S. ARMY TANK AUTOMOTIVE COMMAND WARREN, MICHIGAN 48090	
M939 SERIES M809 SERIES M39 SERIES 12301057 M44A2 SERIES		DRAWN BY <i>B. J. You</i> DATE <i>6-28-84</i> CHECKED <i>R. B. Smith</i> ENGINEER <i>V. A. Smith</i> DRAWING APPROVAL <i>W. B. Smith</i>		INSTRUCTIONS FOR INSTALLATION OF CONVOY WARNING LIGHT KIT	
SEE ENGINEERING RECORDS NEXT ASSY USED ON APPLICATION		DESIGN APPROVAL <i>W. B. Smith</i> 6/29/84		SIZE B	CODE IDENT. NO. 19207
				DRAWING NO. 12301086	
				SCALE	UNIT WT.
				SHEET 4	

PART NO.

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NOTE

PIN IN MACHINE GUN MOUNT POST MAY HAVE TO BE REMOVED BEFORE CORD ASSEMBLY WILL DROP THROUGH.

G. INSTALL SUPPORT TUBE AND WARNING LIGHT THROUGH BRACKET AND INTO LOWER TUBE TO LOWEST WARNING LIGHT POSITION AND INSERT PIN.

H. REMOVE EXISTING SCREW FROM MACHINE GUN MOUNT BRACKET AND DISCARD. INSTALL MS21333-122 CLAMP, MS27183-14 WASHER, AND 425648 SCREW TO SECURE CORD ASSEMBLY TO BRACKET AS SHOWN ON SHEET 4, FIGURE 5.

I. CONNECT CONVOY HARNESS "POS" TO CORD ASSEMBLY "POS" AND HARNESS ASSEMBLY "GND" TO CORD ASSEMBLY "GND". COIL ANY EXCESS WIRE TO EXISTING HARNESS WITH TIEDOWN STRAPS.

J. ROUTE "GND" STRAP ALONG INSIDE OF FRAME RAIL TO REAR STEP HANGER. REMOVE EXISTING SCREW AND NUT FROM HANGER AND DISCARD AS SHOWN ON SHEET 4, FIGURE 7.

K. ATTACH GROUND STRAP BY INSTALLING MS90726-65 SCREW THROUGH FRAME. THEN PLACE MS35335-36 WASHER, GROUND STRAP, MS27183-14 WASHER, AND MS51922-21 NUT AS SHOWN ON SHEET 4, SECTION A-A. SECURE STRAP ALONG EXISTING HARNESS WITH MS3367/1-9 TIEDOWN STRAPS.

L. FOR PROPER HEIGHT ADJUSTMENT, REFER TO INSTRUCTION PLATE LOCATED ON PIN CHAIN SHOWN ON SHEET 1, FIGURE 1 AND ON SHEET 2, FIGURE 2.

3-3. TEST INSTALLATION.

A. CONNECT BATTERY CABLES.

NOTE

LIGHT SWITCH MUST BE IN SERVICE DRIVE POSITION TO OPERATE WARNING LIGHT.

B. TEST INSTALLATION TO MAKE CERTAIN THAT BOTH LEFT AND RIGHT WARNING LIGHTS ARE FUNCTIONING.

NOTE

SPOT PAINT AS REQUIRED.

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12301057 SEE ENGINEERING RECORDS NEXT ASSY APPLICATION		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON 2 PLACES 3 PLACES ANGLES ± ± ± MATERIAL MATERIAL ENGINEERING	CONTRACT NUMBER 7AAE07-81 C-5691 CONTRACTOR AM General Corp. DETROIT, MICHIGAN DRAWN BY DATE 6-28-84 CHECKED BY ENGINEER DRAWING APPROVAL DESIGN APPROVAL 6/29/84	U.S. ARMY TANK AUTOMOTIVE COMMAND WARREN, MICHIGAN 48090 INSTRUCTIONS FOR INSTALLATION OF CONVOY WARNING LIGHT KIT SIZE B CODE IDENT. NO. 19207 DRAWING NO. 12301086 SCALE UNIT WT. SHEET 5
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