

# EX FRONT BUMPER & RX FRONT BUMPER

JL WRANGLER & GLADIATOR

## PLEASE READ ENTIRELY BEFORE YOU START

To guarantee a quality installation, we recommend reading these instructions thoroughly before beginning any work. These instructions assume a certain amount of mechanical ability and are not written nor intended for someone not familiar with auto repair.

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- I. Vehicle Preparation
- II. Prepare Main Structural Weldment
- III. Install Winch Mount (Optional)
- IV. Install Main Structure to Vehicle
- V. Install Center Stamping
- VI. RX "Stubby" Corner Installation
- VII FX "Full Width" Corner Installation
- VIII. Instal Front Skid Plate (Optional)
- IX. Secure Tow Loops
- X. Install Fog Light Bezels and Step Pads

#### **REQUIRED TOOLS**

Common Hand Tools

Allen Drivers

T20 Torx Driver

Torque Wrench (recommended)

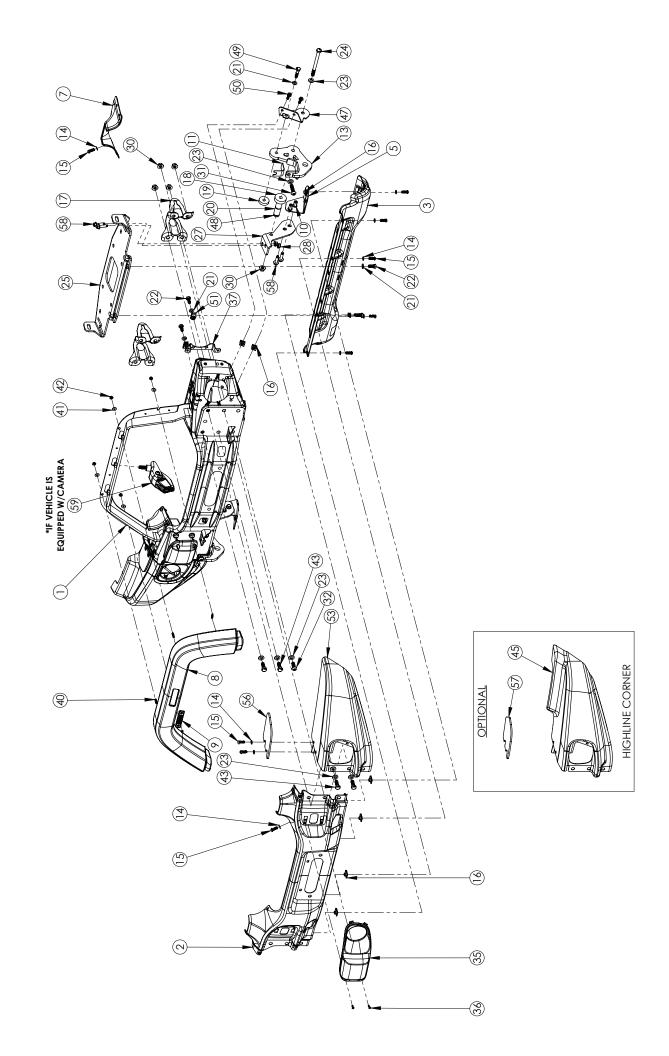
Telescoping Magnet

Slipper/Pry Bar (to aid in hole alignment)

Optional: M8-1.25, M10-1.5, M12-1.75 thread taps

AEV30446AB

Last Updated: 10/25/21

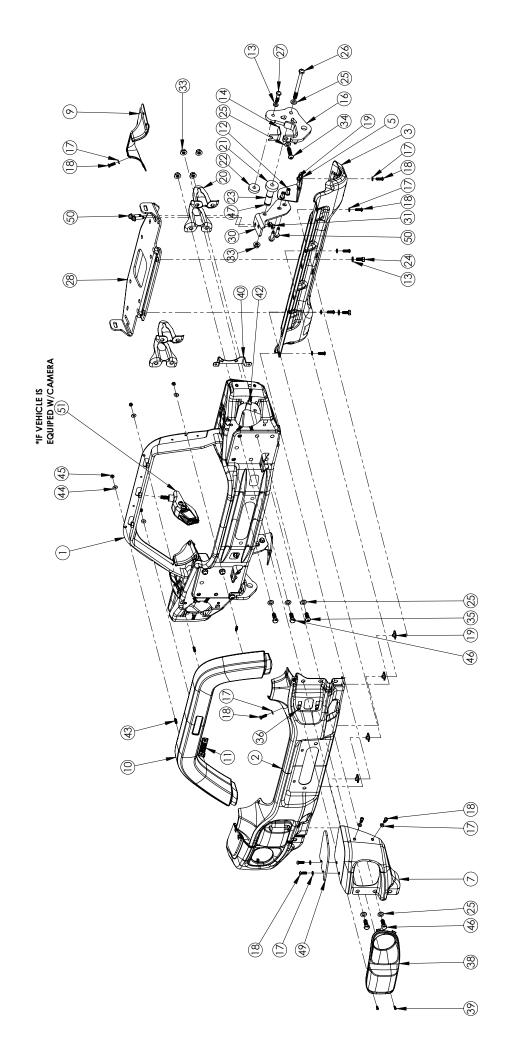




ITEM NO.	PartNo	DESCRIPTION	QTY.
1	AJLB0116AA	FAIRLEAD WELDMENT	1
2	AJLB1000AB	CENTER STAMPING	1
က	AJLB1002AA	SKIDPLATE	-
4	AJLB1004AA	RH SKID ATTACHING BRKT	1
5	AJLB1005AA	LH SKID ATTACHING BRKT	1
9	AJLB1026AB	RH TUBE CLOSEOUT	-
7	AJLB1027AB	LH TUBE CLOSEOUT	1
8	AJLB1104AA	TUBE COVER	1
6	60406204AA	BADGE	-
10	AEV93030AA	M10 X 1.5 HEX BODY RIVNUT	4
11	AJLB1061AA	TOW LOOP SPACER	2
12	AJLB0104AA	RH TOW LOOP	1
13	AJLB0105AA	LH TOW LOOP	1
14	AEV98007AB	M8 FLAT WASHER	14
15	AEV91018AB	M8 X 1.25 X25 BHCS	14
16	95210A190	M8 X 1.25 U-NUT	10
17	OE	OE FRAME HORN REINFORCEMENT BRACKETS	-
18	AJLB1089AA	LWR TOW LOOP SPACER	2
61	AJLB1088AA	UPR TOW LOOP SPACER	2
20	AJLB1077AA	TOW LOOP CRUSH SLEEVE	4
21	AEV98006AA	M10 FLAT WASHER	8
22	AEV91025AA	M10 X 1.5 X 25 HCS	9
23	AEV98004AC	M12 FLAT WASHER	14
24	AEV91151AA	M12 X 1.75 X150 HCS	2
25	AJLB0120AA	WINCH MOUNT	1
26	AJLB1034AA	RH WINCH MOUNT REINFORCEMENT	-
27	AJLB1035AA	LH WINCH MOUNT REINFORCEMENT	-
28	AEV93002AB	M10 X 1.5 FLANGE NUT	4
29	AEV93003AB	M8 X 1.25 FLANGE NUT	4

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DESCRIPTION	M12 X 1.5 FLANGE NUT	M12 X 1.75 X 50 BHCS	M12 X 1.75 X 35 BHCS	M4.2 X 1.41 U-NUT	RH FOG BEZEL	TH FOG BEZEL	NO. 8 X .75" SHEET METAL SCREW	LH FOG LIGHT BRACKET			NO. 8 CLIP ON NUT	NO. 8 CLIP ON NUT M6 X 1.0 X 25 FULLY THREADED STUD	M6 X 1.0 X 25 FULLY THREADED STUD M6 FENDER WASHER	M6 X 1.0 X 25 FULLY THREADED STUD M6 X 1.0 FENDER WASHER M6 X 1.0 FLANGE NUT	M6 X 1.0 X 25 FULLY THREADED STUD M6 X 1.0 FLANGE WASHER M6 X 1.0 FLANGE NUT M12 X 1.75 X 35 HCS	M6 X 1.0 X 25 FULLY THREADED STUD M6 X 1.0 X 25 FULLY THREADED STUD M6 FENDER WASHER M6 X 1.0 FLANGE NUT M12 X 1.75 X 35 HCS RH HIGHLINE CORNER	M6 X 1.0 X 25 FULLY THREADED STUD M6 X 1.0 X 25 FULLY THREADED STUD M6 FENDER WASHER M6 X 1.0 FLANGE NUT M12 X 1.75 X 35 HCS RH HIGHLINE CORNER LH HIGHLINE CORNER	M6 X 1.0 X 25 CUP ON NUT  M6 X 1.0 X 25 FULLY THREADED STUD  M6 FENDER WASHER  M8 X 1.0 FLANGE NUT  M12 X 1.75 X 35 HCS  RH HIGHLINE CORNER  LH HIGHLINE CORNER  RH CORNER REINFORCEMENT	M6 X 1.0 X 25 CUP ON NUT  M6 X 1.0 X 25 FULLY THREADED STUD  M6 FENDER WASHER  M8 X 1.0 FLANGE NUT  M12 X 1.75 X 35 HCS  RH HIGHLINE CORNER  LH HIGHLINE CORNER  RH CORNER REINFORCEMENT  LH CORNER REINFORCEMENT	M6 X 1.0 X 25 FULLY THREADED STUD M6 X 1.0 X 25 FULLY THREADED STUD M6 FENDER WASHER M6 X 1.0 FLANGE NUT M12 X 1.75 X 35 HCS RH HIGHLINE CORNER LH HIGHLINE CORNER LH HIGHLINE CORNER LH CORNER REINFORCEMENT LH CORNER REINFORCEMENT LH CORNER REINFORCEMENT LH CORNER REINFORCEMENT	MO. 8 CLIP ON NUT  MO. 8 CLIP ON NUT  M6 X 1.0 X 25 FULLY THREADED STUD  M6 FENDER WASHER  M6 X 1.0 FLANGE NUT  M12 X 1.75 X 35 HCS  RH HIGHLINE CORNER  ILH HIGHLINE CORNER  RH CORNER REINFORCEMENT  LH CORNER REINFORCEMENT  LH CORNER REINFORCEMENT  MINCH MOUNT REINFORCEMENT  M10 X 1.5 X 45 HCS	MA X 1.0 X 25 CUP ON NUT  MO. 8 CUP ON NUT  MA X 1.0 X 25 FULLY THREADED STUD  MA ENDER WASHER  MA X 1.0 FLANGE NUT  MA X 1.0 FLANGE NUT  MA X 1.0 FLANGE NUT  MA X 1.25 X 25 FLANGE NEN  MA X 1.25 X 25 FLANGED STUD  MO. 8 CUP ON NUT  MAN X 1.25 X 25 FLANGED HCS	MA X 1.0 X 25 CUP ON NUT  MO. 8 CUP ON NUT  MA FENDER WASHER  MA X 1.0 FLANGE NUT  MA X 1.0 FLANGE NUT  MA X 1.75 X 35 HCS  RH HIGHLINE CORNER  LH HIGHLINE CORNER  RH CORNER REINFORCEMENT  LH CORNER REINFORCEMENT  WINCH MOUNT REINFORCEMENT SPAC  M10 X 1.5 X 45 HCS  M8 X 1.25 X 25 FLANGED HCS  M10 X 1.5 U-NUT	MA X 1.0 X 25 CUP ON NUT  MO. 8 CUP ON NUT  MA FENDER WASHER  MA X 1.0 FLANGE NUT  MA X 1.0 FLANGE NUT  MA X 1.0 FLANGE NUT  MA X 1.75 X 35 HCS  RH HIGHLINE CORNER  ILH HIGHLINE CORNER  RH CORNER REINFORCEMENT  LH CORNER REINFORCEMENT  LH CORNER REINFORCEMENT  MINCH MOUNT REINFORCEMENT SPAC  M10 X 1.5 X 45 HCS  M8 X 1.25 X 25 FLANGED HCS  M10 X 1.5 U-NUT  RH STANDARD CORNER	MA X 1.0 X 25 FULLY THREADED STUD  M6 X 1.0 X 25 FULLY THREADED STUD  M6 X 1.0 FLANGE NUT  M12 X 1.75 X 35 HCS  M12 X 1.75 X 35 HCS  RH HIGHLINE CORNER  LH HIGHLINE CORNER  LH CORNER REINFORCEMENT  LH CORNER REINFORCEMENT  WINCH MOUNT REINFORCEMENT SPAC  M10 X 1.5 X 45 HCS  M8 X 1.25 X 25 FLANGED HCS  M10 X 1.5 U-NUT  RH STANDARD CORNER  LH STANDARD CORNER	MA X 1.0 X 25 CUP ON NUT  MO. 8 CUP ON NUT  MA FENDER WASHER  MA X 1.0 FLANGE NUT  MA X 1.0 FLANGE NUT  MA X 1.0 FLANGE NUT  MA X 1.75 X 35 HCS  RH HIGHLINE CORNER  LH HIGHLINE CORNER  LH CORNER REINFORCEMENT  LH CORNER REINFORCEMENT  MINCH MOUNT REINFORCEMENT SPAC  MIO X 1.5 X 45 HCS  MR X 1.25 X 25 FLANGED HCS  MR X 1.25 X 25 FLANGED HCS  MR X 1.25 X 25 FLANGED HCS  RH STANDARD CORNER  LH STANDARD CORNER  LH STANDARD CORNER  RH HIGHLINE STEP PAD	MA X 1.0 X 25 FULLY THREADED STUD  MA X 1.0 X 25 FULLY THREADED STUD  MA X 1.0 FLANGE NUT  MA X 1.0 FLANGE NUT  MA X 1.0 FLANGE NUT  MA X 1.75 X 35 HCS  RH HIGHLINE CORNER  LH HIGHLINE CORNER  LH CORNER REINFORCEMENT  LH CORNER REINFORCEMENT  MINCH MOUNT REINFORCEMENT SPAC  MIO X 1.5 X 45 HCS  MA X 1.25 X 25 FLANGED HCS  MA X 1.25 X 25 FLANGED HCS  MA X 1.25 X 25 FLANGED HCS  RH STANDARD CORNER  LH STANDARD CORNER  RH HIGHLINE STEP PAD  RH STANDARD STEP PAD	MO. 8 CLIP ON NUT  NO. 8 CLIP ON NUT  MO. 8 CLIP ON NUT  MA X 1.0 X 25 FULLY THREADED STUD  M6 X 1.0 FLANGE NUT  M12 X 1.75 X 35 HCS  RH HIGHLINE CORNER  LH HIGHLINE CORNER  LH CORNER REINFORCEMENT  LH CORNER REINFORCEMENT  MINCH MOUNT REINFORCEMENT SPAC  M10 X 1.5 X 45 HCS  M8 X 1.25 X 25 FLANGED HCS  M8 X 1.25 X 25 FLANGED HCS  M10 X 1.5 U-NUT  RH STANDARD CORNER  LH STANDARD CORNER  RH HIGHLINE STEP PAD  RH STANDARD STEP PAD  RH STANDARD STEP PAD	MO. 8 CIPLO IN INTEGRACE IN ON. 8 CIPLO IN NUT  MO. 8 CIPLO NUT  MA X 1.0 X 25 FULLY THREADED STUD  MA X 1.0 FLANGE NUT  MI 2 X 1.75 X 35 HCS  RH HIGHLINE CORNER  LH HIGHLINE CORNER  LH CORNER REINFORCEMENT  LH CORNER REINFORCEMENT  WINCH MOUNT REINFORCEMENT SPAC  M10 X 1.5 X 45 HCS  M8 X 1.25 X 25 FLANGED HCS  M8 X 1.25 X 25 FLANGED HCS  M10 X 1.5 U-NUT  RH STANDARD CORNER  LH STANDARD CORNER  LH STANDARD STEP PAD  LH HIGHLINE STEP PAD	MO. 8 CLIP ON NUT  NO. 8 CLIP ON NUT  NO. 8 CLIP ON NUT  MA X 1.0 X 25 FULLY THREADED STUD  MA X 1.0 FLANGE NUT  MI 2 X 1.75 X 35 HCS  RH HIGHLINE CORNER  LH HIGHLINE CORNER  LH HIGHLINE CORNER  LH CORNER REINFORCEMENT  LH CORNER REINFORCEMENT  WINCH MOUNT REINFORCEMENT  MI 0 X 1.5 X 45 HCS  MA X 1.25 X 25 FLANGED HCS  MA STANDARD CORNER  LH STANDARD CORNER  RH HIGHLINE STEP PAD  LH STANDARD STEP PAD  LH STANDARD STEP PAD  LH HIGHLINE STEP PAD
i	AEV93001AB	AEV91002AE	AEV91001AB	11548580	AJLB1032AA	AJLB1033AA	AEV91154AA	AJLB1023AA	A.II B1022AA		94810A100	94810A100 AEV91163AA	948104100 AEV91163AA AEV91056AA	94810A100 AEV91163AA AEV91056AA AEV93027AA	AEV91056AA AEV91056AA AEV93027AA AEV91016AA	94810A100 AEV91163AA AEV91056AA AEV93027AA AEV91016AA AJLB0112AA	94810A100 AEV91163AA AEV91056AA AEV93027AA AEV91016AA ALB0112AA AJLB0113AA	AEV91056AA AEV91056AA AEV91016AA AEV91016AA ALB0112AA AJLB0113AA AJLB0113AA	4810A100 4810A100 4810A100 481091056AA 481091056AA 48100112AA 491B0113AA AJLB0113AA AJLB1086AA AJLB1087AA	94810A100 AEV91163AA AEV91056AA AEV91016AA AEV91016AA AJJB0112AA AJJB0113AA AJJB0113AA AJJB1086AA AJJB1080AA	AEV91163AA AEV91056AA AEV91056AA AEV91016AA AUB0112AA AJLB0113AA AJLB1086AA AJLB1087AA AJLB1087AA AJLB1087AA AJLB1087AA	AEV91153AA AEV91056AA AEV91056AA AEV91016AA AUB0112AA AJLB0113AA AJLB1086AA AJLB1087AA AJLB1087AA AJLB1087AA AJLB1087AA AJLB1087AA AJLB1087AA AJLB1087AA AJLB1080AA AJLB1080AA AJLB1080AA AJLB1080AA	248104100 4EV91163AA 4EV910163AA 4EV91056AA 4EV91016AA 4ALB0112AA 4ALB0113AA AJLB1086AA AJLB1087AA AJLB1080AA AJLB1080AA ALB1080AA ALB1080AA ALB1080AA ALB1080AA	AEV9102AAAEV9105AAAEV9105AAAEV93027AAAEV91016AAAALB0112AAALB0113AAALB1086AAAALB1087AAALB1080AAAALB1080AAAEV91153AAAALB0114AAAAALB0114AAAAALB0114AAAAALB0114AAAAALB0114AAAAALB0114AAAAALB0114AAAAAB10000000000000000000000000000	94810A100 AEV9105AAA AEV9105AAA AEV93027AA AEV93027AA AJLB0112AA AJLB0113AA AJLB1086AA AJLB1086AA AJLB1080AA AJLB1090AA AJLB0115AA	948104100 AEV91056AA AEV93027AA AEV93027AA AEV91016AA AJLB0112AA AJLB0113AA AJLB1086AA AJLB1080AA AJLB1090AA	948104100 AEV91056AA AEV93027AA AEV93027AA AEV93016AA AJLB0112AA AJLB0113AA AJLB1086AA AJLB1086AA AJLB1086AA AJLB1080AA AJLB1080AA AJLB1090AA AJLB1090AA AJLB1090AA AJLB1090AA AJLB1070AB AJLB0115AA AJLB0115AA AJLB0115AA AJLB0115AA	94810A100 AEV91056AA AEV93027AA AEV93027AA AEV93016AA AJLB0113AA AJLB0113AA AJLB1086AA AJLB1086AA AJLB1080AA AJLB1080AA AJLB1080AA AJLB1090AA AJLB1090AA AJLB1090AA AJLB1090AA AJLB1090AA AJLB1070AB AJLB1070AB AJLB1070AB AJLB1070AB AJLB1070AB	948104100 AEV91056AA AEV93027AA AEV93027AA AEV93016AA AJLB0113AA AJLB0113AA AJLB1086AA AJLB1086AA AJLB1087AA AJLB1087AA AJLB1087AA AJLB1087AA AJLB1087AA AJLB1087AA AJLB1070AB AJLB0115AA AJLB0115AA AJLB0115AA AJLB0115AA AJLB0115AA AJLB0115AA AJLB0115AA AJLB0115AA AJLB0107AB	948104100 AEV91163AA AEV93027AA AEV91016AA AEV91016AA AUB0113AA AUB0113AA AUB1086AA AUB1087AA AUB1087AA AUB1087AA AUB1087AA AUB1087AA AUB1087AA AUB1070AB AUB0115AA AUB0115AA AUB0115AA AUB0107AB AUB1070AB
<u>.</u>	30 AI	31 A	32 AI	33	34 A.	35 A.	36 AI	37 A.	38 A.		36   67																			







1         ALIBOTIGAA         FARIREAD WELDMENT         1           2         ALIBIODOAB         CENTER STAMPING         1           3         ALIBIODOAA         SKIDPLATE         1           4         ALIBIODOAA         RH SKID ATTACHING BRKT         1           5         ALIBIOGAA         LH SKID ATTACHING BRKT         1           7         ALIBIOGAB         RH STUBBY CORNER STAMPING         1           8         ALIBIOGAB         RH STUBBY CORNER STAMPING         1           9         ALIBIOGAB         RH STUBBE CLOSEOUT         1           10         ALIBIOGAA         MITO TIS ECCOVER         1           11         ALIBIOGAA         MITO TIS HEX BODY RIVNUT         4           12         ALIBIOGAA         MITO TIS HEX BODY RIVNUT         4           13         ALIBIOGAA         MITO TIS HEX BODY RIVNUT         1           14         ALIBIOGAA         MITO FLAT WASHER         1           15         ALIBIOGAA         MITO TIS HEX BODY RIVNUT         6           16         ALIBIOGAA         MAR TISS USA IS BHCS         18           17         ACVIGIOGAB         MAR TISS USA IS BHCS         1           20         OEM PARTS         UPR TOWLO	NO.	PartNo	DESCRIPTION	QTY.
ALIB 1000AB         CENTER STAMPING           ALIB 1002AA         SKIDPLATE           ALIB 1002AA         RH SKID ATTACHING BRKT           ALIB 1005AA         LH SKID ATTACHING BRKT           ALIB 1005AB         LH STUBBY CORNER STAMPING           ALIB 1025AB         RH TUBE CLOSEOUT           ALIB 1025AB         RH TUBE CLOSEOUT           ALIB 104AA         BADGE           ALIB 104AA         MIO X 1.5 HEX BODY RIVANUT           ALIB 104AA         MIO X 1.5 HEX BODY RIVANUT           ALIB 106AA         MIO FLAT WASHER           ALIB 106AA         MIO FLAT WASHER           ALIB 106AA         MIO X 1.5 HEX BODY RIVANUT           ALIB 106AA         MIO X 1.5 HEX BODY RIVANUT           ALIB 106AA         MIO X 1.5 HEX BODY RIVANUT           ALIB 106AA         MIN X 1.25 U-NUT           ALIB 108AA         LWR TOW LOOP SPACER PLATE           ALIB 108AA         UPR TOW LOOP SPACER PLATE           ALIB 108BAA         TOWLOOP CRUSH SIENE	1	AJLB0116AA	FAIRLEAD WELDMENT	1
AJLB1002AA         SKIDPLATE           AJLB1004AA         RH SKID ATTACHING BRKT           AJLB1030AB         LH SKID ATTACHING BRKT           AJLB1030AB         RH STUBBY CORNER STAMPING           AJLB1031AB         LH STUBBY CORNER STAMPING           AJLB1032AB         LH TUBEY CORNER STAMPING           AJLB1032AB         LH TUBEY CORNER STAMPING           AJLB104AA         LH TUBEY CORNER STAMPING           AJLB104AA         TUBE COSEOUT           ALB1061AA         M10 X 1.5 HEX BODY RIVNUT           ALB1061AA         M10 X 1.5 HEX BODY RIVNUT           ALB1061AA         M10 KLAT WASHER           ALB1061AA         LH TOW LOOP SPACER           ALB1061AA         M8X 1.25 UNUT           OEM PARTS         RRAME HORN REINF           ALB1089AA         LWR TOW LOOP SPACER PLATE           AJLB1089AA         UPR TOW LOOP SPACER PLATE           AJLB1089AA         TOWLOOP SPACER PLATE           AJLB1089AA         TOWLOOP SPACER PLATE           AJLB1089AA         TOWLOOP SPACER PLATE           AJLB1089AA         TOWLOOP SPACER PLATE           ALB1089AA         TOWLOOP SPACER PLATE	2	AJLB1000AB	CENTER STAMPING	1
AJLB1004AA         RH SKID ATTACHING BRKT           AJLB1005AA         LH SKID ATTACHING BRKT           AJLB1030AB         RH STUBBY CORNER STAMPING           AJLB103AB         LH STUBBY CORNER STAMPING           AJLB103AB         LH TUBE CLOSEOUT           AJLB102AB         RH TUBE CLOSEOUT           AJLB102AA         LH TUBE CLOSEOUT           AJLB106AAA         BADGE           AEV93030AA         M10 X 1.5 HEX BODY RIVNUT           ALLB010AAA         M10 X 1.5 HEX BODY RIVNUT           ALLB010AAA         M10 K LAT WASHER           ALLB010AAA         M8 FLAT WASHER           ALLB010AAA         M8 X 1.25 U-NUT           OEM PARTS         FRAME HORN REINF           ALLB010ABAB         M8 X 1.25 U-NUT           OEM PARTS         LWR TOW LOOP SPACER PLATE           AJLB108BAA         UPR TOW LOOP SPACER PLATE           AJLB108BAA         UPR TOW LOOP SPACER PLATE           AJLB108BAA         TOW LOOP CRUSH SLEEVE           AEV98004AC         M10R TOW LOOP SPACER PLATE	3	AJLB1002AA	SKIDPLATE	l
ALB 1005AA         LH SKID ATTACHING BRKT           ALB 1030AB         RH STUBBY CORNER STAMPING           ALB 1031AB         LH STUBBY CORNER STAMPING           ALB 1025AB         LH TUBE CLOSEOUT           ALB 1025AB         RH TUBE CLOSEOUT           ALB 1025AB         LH TUBE CLOSEOUT           ALB 104AA         BADGE           G0406204AA         MI 10 X 1.5 HEX BODY RIVNUT           AEV38006AA         MI 10 X 1.5 HEX BODY RIVNUT           ALB 1061AA         TOWN LOOP SPACER           ALB 180105AA         MR FLAT WASHER           ALB 180105AA         MR FLAT WASHER           ALB 180105AA         MR X 1.25 U-NUT           OEM PARTS         FRAME HORN REINF           ALB 1089AA         LWR TOW LOOP SPACER PLATE           ALB 1088AA         UPR TOW LOOP SPACER PLATE           ALB 1088AA         UPR TOW LOOP SPACER PLATE           ALB 1088AA         TOW LOOP SPACER PLATE           AEV98004AC         M10 X 1.5 X 25 HCS	4	AJLB1004AA	RH SKID ATTACHING BRKT	l
ALIB 1030AB         RH STUBBY CORNER STAMPING           ALIB 103CAB         LH STUBBY CORNER STAMPING           ALIB 102CAB         LH TUBE CLOSEOUT           AJIB 102CAB         RH TUBE CLOSEOUT           AJIB 102CAB         BADGE           G0406204AA         M10 X 1.5 HEX BODY RIVNUT           AEV98006AA         M10 X 1.5 HEX BODY RIVNUT           AJIB 10104AA         M10 X 1.5 HEX BODY RIVNUT           AJIB 10105AA         RH TOW LOOP SPACER           AJIB 10105AA         M8 X 1.25 U-NUT           AEV98007AB         M8 X 1.25 U-NUT           OEM PARTS         FRAME HORN REINF           AJIB 1089AA         LWR TOW LOOP SPACER PLATE           AJIB 1077AA         TOW LOOP SPACER PLATE           AJIB 1077AA         TOW LOOP SPACER PLATE           AJIB 1077AA         TOW LOOP SPACER PLATE           ABV98004AC         M10 X 1.5 X 25 HCS	5	AJLB1005AA	LH SKID ATTACHING BRKT	1
ALLB 1025AB         LH STUBBY CORNER STAMPING           ALLB 1025AB         RH TUBE CLOSEOUT           ALLB 102AAA         LH TUBE CLOSEOUT           ALB 104AA         BADGE           AEV93030AA         M10 X 1.5 HEX BODY RIVNUT           ALB 1061AA         M10 X 1.5 HEX BODY RIVNUT           ALLB 1061AA         M10 ELAT WASHER           ALLB 1061AA         TOW LOOP SPACER           ALLB 1061AA         M8 FLAT WASHER           ALLB 1061AA         M8 FLAT WASHER           ALLB 1061AA         M8 X 1.25 U-NUT           OEM PARTS         M8 X 1.25 U-NUT           OEM PARTS         LWR TOW LOOP SPACER PLATE           ALLB 1089AA         LWR TOW LOOP SPACER PLATE           ALLB 1087AA         UPR TOW LOOP SPACER PLATE           ALLB 1057AA         TOW LOOP CRUSH SLEVE           ALB 1057AA         TOW LOOP CRUSH SLEVE           ALB 1057AA         ALB 1057AA	9	AJLB1030AB	RH STUBBY CORNER STAMPING	l
ALLB 1026AB         RH TUBE CLOSEOUT           ALLB 1027AB         LH TUBE CLOSEOUT           ALLB 1024AA         BADGE           AEV93030AA         M10 X 1.5 HEX BODY RIVNUT           ALLB 1061AA         M10 X 1.5 HEX BODY RIVNUT           ALLB 105AA         M10 FLAT WASHER           ALLB 105AA         RH TOW LOOP SPACER           ALLB 105AA         LH TOW LOOP SPACER           AEV98007AB         M8 X 1.25 X 25 BHCS           AEV91018AB         M8 X 1.25 W 25 BHCS           OEM PARTS         FRAME HORN REINF           ALLB 1089AA         LWR TOW LOOP SPACER PLATE           ALLB 1037AA         TOW LOOP CRUSH SLEEVE           AEV91025AA         M10 X1.5 X25 HCS           AEV98004AC         M12 FLAT WASHER	7	AJLB1031AB	LH STUBBY CORNER STAMPING	l
AJLB1027AB         LHTUBE CLOSEOUT           AJLB104AA         TUBE COVER           60406204AA         BADGE           AEV93030AA         M10 X 1.5 HEX BODY RIVNUT           AEV98006AA         M10 FLAT WASHER           AJLB0104AA         TOW LOOP SPACER           AJLB0105AA         RH TOW LOOP           AJLB0105AB         M8 FLAT WASHER           AEV991018AB         M8 X 1.25 X 25 BHCS           95210A190         M8 X 1.25 U-NUT           OEM PARTS         FRAME HORN REINF           AJLB1089AA         LWR TOW LOOP SPACER PLATE           AJLB1088AA         UPR TOW LOOP SPACER PLATE           AJLB1085AA         TOW LOOP SPACER PLATE           ALB1055AA         TOW LOOP SPACER PLATE           ALB1055AA         M10 X 1.5 X 25 HCS           AEV91025AA         M10 X 1.5 X 25 HCS	8	AJLB1026AB	RH TUBE CLOSEOUT	1
AJLB1104AA         TUBE COVER           60406204AA         BADGE           AEV93030AA         M10 X 1.5 HEX BODY RIVNUT           AEV98006AA         M10 FLAT WASHER           AJLB0104AA         TOWLOOP SPACER           AJLB0105AA         RH TOW LOOP           ALB0105AA         LH TOW LOOP           AEV91018AB         M8 K 1.25 U-NUT           OEM PARTS         M8 X 1.25 U-NUT           AJLB1089AA         LWR TOW LOOP SPACER PLATE           AJLB1088AA         UPR TOW LOOP SPACER PLATE           AJLB1025AA         TOW LOOP CRUSH SLEEVE           AEV91025AA         M10 X1.5 X25 HCS           AEV99004AC         M10 X1.5 X25 HCS	6	AJLB1027AB	LH TUBE CLOSEOUT	1
60406204AA         BADGE           AEV93030AA         M10 X 1.5 HEX BODY RIVNUT           AEV98006AA         M10 FLAT WASHER           AJLB1061AA         TOW LOOP SPACER           AJLB0105AA         RH TOW LOOP           ALB0105AB         M8 FLAT WASHER           AEV98007AB         M8 FLAT WASHER           AEV91018AB         M8 X 1.25 U-NUT           OEM PARTS         FRAME HORN REINF           AJLB1089AA         LWR TOW LOOP SPACER PLATE           AJLB1088AA         UPR TOW LOOP SPACER PLATE           AJLB1025AA         TOW LOOP CRUSH SLEEVE           AEV991025AA         M10 X1.5 X25 HCS           AEV98004AC         M10 X1.5 M25 HCS	10	AJLB1104AA	TUBE COVER	1
AEV93030AA         M10 X 1.5 HEX BODY RIVNUT           AEV98006AA         M10 FLAT WASHER           AJLB1061AA         TOW LOOP SPACER           AJLB0105AA         RH TOW LOOP           ALB0105AA         M8 FLAT WASHER           AEV91018AB         M8 X 1.25 X 25 BHCS           95210A190         M8 X 1.25 U-NUT           OEM PARTS         M8 X 1.25 U-NUT           AJLB1089AA         LWR TOW LOOP SPACER PLATE           AJLB1089AA         UPR TOW LOOP SPACER PLATE           AJLB1025AA         TOW LOOP CRUSH SLEEVE           AEV91025AA         M10 X1.5 X25 HCS           AEV99004AC         M12 FLAT WASHER	11	60406204AA	BADGE	1
AEV98006AA         M10 FLAT WASHER           AJLB1061AA         TOW LOOP SPACER           AJLB0105AA         RH TOW LOOP           AJLB0105AA         LH TOW LOOP           AEV98007AB         M8 FLAT WASHER           AEV91018AB         M8 X 1.25 W 25 BHCS           95210A190         M8 X 1.25 U-NUT           OEM PARTS         FRAME HORN REINF           AJLB1089AA         LWR TOW LOOP SPACER PLATE           AJLB108BAA         UPR TOW LOOP SPACER PLATE           ALB108BAA         TOW LOOP CRUSH SLEEVE           AEV91025AA         M10 X1.5 X25 HCS           AEV98004AC         M12 FLAT WASHER	12	AEV93030AA	M10 X 1.5 HEX BODY RIVNUT	4
AJLB1061AA         TOWLOOP SPACER           AJLB0104AA         RH TOWLOOP           AJLB0105AA         LH TOWLOOP           AEV98007AB         M8 FLAT WASHER           AEV91018AB         M8 X 1.25 WCS           95210A190         M8 X 1.25 U-NUT           OEM PARTS         M8 X 1.25 U-NUT           AJLB1089AA         LWR TOW LOOP SPACER PLATE           AJLB108SAA         UPR TOW LOOP SPACER PLATE           ALB107AA         TOW LOOP CRUSH SLEEVE           AEV991025AA         M10 X1.5 X25 HCS           AEV98004AC         M12 FLAT WASHER	13	AEV98006AA	M10 FLAT WASHER	4
AJLB0104AA         RH TOW LOOP           AJLB0105AA         LH TOW LOOP           AEV98007AB         M8 FLAT WASHER           AEV91018AB         M8 X 1.25 X 25 BHCS           95210A190         M8 X 1.25 U-NUT           OEM PARTS         FRAME HORN REINF           AJLB1089AA         LWR TOW LOOP SPACER PLATE           AJLB1088AA         UPR TOW LOOP SPACER PLATE           AJLB1025AA         M10 X1.5 X25 HCS           AEV99004AC         M10 X1.5 X25 HCS	14	AJLB1061AA	TOW LOOP SPACER	7
ALLBOTOSAA         LHTOWLOOP           AEV98007AB         MAB FLAT WASHER           AEV98007AB         MAR X 1.25 X 25 BHCS           95210A190         MAR X 1.25 U-NUT           OEM PARTS         FRAME HORN REINF           AJLB1089AA         LWR TOW LOOP SPACER PLATE           AJLB1088AA         UPR TOW LOOP SPACER PLATE           ALLB107AA         TOW LOOP CRUSH SLEEVE           AEV91025AA         M10 X1.5 X25 HCS           AEV98004AC         M12 FLAT WASHER	15	AJLB0104AA	RH TOW LOOP	l
AEV98007AB         MR FLAT WASHER           AEV91018AB         MR X 1.25 X 25 BHCS           95210A190         MR X 1.25 U-NUT           OEM PARTS         FRAME HORN REINF           ALLB1089AA         LWR TOW LOOP SPACER PLATE           AJLB1088AA         UPR TOW LOOP SPACER PLATE           AJLB107AA         TOW LOOP CRUSH SLEEVE           AEV981025AA         M10 X1.5 X25 HCS           AEV98004AC         M12 FLAT WASHER	16	AJLB0105AA	LH TOW LOOP	l
AEV91018AB         M8 X 1.25 X 25 BHCS           95210A190         M8 X 1.25 U-NUT           OEM PARTS         FRAME HORN REINF           AJLB1089AA         LWR TOW LOOP SPACER PLATE           AJLB1088AA         UPR TOW LOOP SPACER PLATE           AJLB107AA         TOW LOOP CRUSH SLEEVE           AEV91025AA         M10 X1.5 X25 HCS           AEV98004AC         M12 FLAT WASHER	17	AEV98007AB	M8 FLAT WASHER	18
95210A190         M8 X 1.25 U-NUT           OEM PARTS         FRAME HORN REINF           ALLB1089AA         LWR TOW LOOP SPACER PLATE           ALLB1088AA         UPR TOW LOOP SPACER PLATE           ALLB107AA         TOW LOOP CRUSH SLEEVE           AEV91025AA         M10 X1.5 X25 HCS           AEV98004AC         M12 FLAT WASHER	18	AEV91018AB	M8 X 1.25 X 25 BHCS	18
OEM PARTSFRAME HORN REINFAJLB1089AALWR TOW LOOP SPACER PLATEAJLB1088AAUPR TOW LOOP SPACER PLATEAJLB1077AATOW LOOP CRUSH SLEEVEAEV91025AAM10 X1.5 X25 HCSAEV98004ACM12 FLAT WASHER	19	95210A190	M8 X 1.25 U-NUT	9
AJLB1089AA         LWR TOW LOOP SPACER PLATE           AJLB1088AA         UPR TOW LOOP SPACER PLATE           AJLB1077AA         TOW LOOP CRUSH SLEEVE           AEV91025AA         M10 X1.5 X25 HCS           AEV98004AC         M12 FLAT WASHER	20	OEM PARTS	FRAME HORN REINF	4
AJLB1088AA         UPR TOW LOOP SPACER PLATE           AJLB1077AA         TOW LOOP CRUSH SLEEVE           AEV91025AA         M10 X1.5 X25 HCS           AEV98004AC         M12 FLAT WASHER	21	AJLB1089AA	LWR TOW LOOP SPACER PLATE	2
AJLB1077AA         TOW LOOP CRUSH SLEEVE           AEV91025AA         M10 X1.5 X25 HCS           AEV98004AC         M12 FLAT WASHER	22	AJLB1088AA	UPR TOW LOOP SPACER PLATE	2
AEV91025AA         M10 X1.5 X25 HCS           AEV98004AC         M12 FLAT WASHER	23	AJLB1077AA	TOW LOOP CRUSH SLEEVE	4
AEV98004AC M12 FLAT WASHER	24	AEV91025AA	M10 X1.5 X25 HCS	2
	25	AEV98004AC	M12 FLAT WASHER	14

26         AEV91151AA         MI12 X 1.75 X 150 HCS           27         AEV9114AAA         MI10 X 1.5 X 45 HCS           28         AALB0120AA         WINOCH MOUNT REINF           30         AALB1033AA         RH WINCH MOUNT REINF           31         AEV93002AB         MI10 X 1.5 FLANGE NUT           32         AEV93002AB         MI10 X 1.5 FLANGE NUT           33         AEV93002AB         MI12 X 1.75 FLANGE NUT           34         AEV93002AB         MI12 X 1.75 FLANGE NUT           35         AEV91002AB         MI12 X 1.75 FLANGE NUT           36         AEV91002AB         MI12 X 1.75 FLANGE NUT           37         ALB1032AA         MA12 X 1.75 X 35 BHCS           38         ALB1032AA         NO. 8 X.75" ROUNDED HEAD SHEET METAL SCREW           40         ALB1022AA         NO. 8 X.75" ROUNDED HEAD SHEET METAL SCREW           41         ALB1022AA         NO. 8 CLIP ON NUT           42         AEV9105AA         M6 X 1.0 X 25 THREADED STUD           43         AEV9105AA         M6 X 1.0 K 25 THREADED STUD           44         AEV9105AA         M6 X 1.0 K 25 THREADED STUD           45         AEV9105AA         M6 X 1.0 FLANGE NASHER           46         ALB1072AB         M110 X 1.5 X 35 KGS </th <th>ITEM NO.</th> <th>PartNo</th> <th>DESCRIPTION</th> <th>QTY.</th>	ITEM NO.	PartNo	DESCRIPTION	QTY.
ALB103AA AJLB1035AA AJLB1035AA AJLB1035AA AEV93003AB AEV93001AB AEV91001AB T1548580 AJLB1032AA AJLB1032AA AJLB1023AA AJLB1022AA AJLB1025AA AJLB1025AA AJLB1090AA AJLB1072AB AJLB	26	AEV91151AA	M12 X 1.75 X 150 HCS	2
AJLB103AAA AJLB1034AA AJLB1035AA AEV93002AB AEV93001AB AEV91001AB T1548580 AJLB1032AA AJLB1032AA AJLB1023AA AJLB1022AA AJLB1025AA AJLB1090AA AJLB1090AA AJLB1072AB AJ	27	AEV91144AA	M10 X 1.5 X 45 HCS	2
AJLB1034AA AJLB1035AA AEV93002AB AEV93001AB AEV91001AB T1548580 AJLB1033AA AJLB1033AA AJLB1023AA AJLB1023AA AJLB1023AA AJLB1023AA AJLB1025AA AJLB1025AA AJLB1090AA AEV9116AA AJLB1090AA AJLB1072AB AJLB1072AB AJLB1073AB	28	AJLB0120AA	WINCH MOUNT	1
ALIB1035AA AEV93002AB AEV93001AB AEV91001AB 11548580 ALIB1032AA ALIB1023AA ALIB1022AA ALIB1022AA AUB1025AA AUB1025AA AUB1090AA AUB1090AA AUB1072AB	29	AJLB1034AA	RH WINCH MOUNT REINF	1
AEV93002AB AEV93001AB AEV91001AB T1548580 AJLB1033AA AJLB1023AA AJLB1030AA ALB1090AA AJLB1090AA AJLB1073AB	30	AJLB1035AA	LH WINCH MOUNT REINF	-
AEV93003AB AEV93001AB AEV91001AB 11548580 AJLB1032AA AJLB1033AA AJLB1023AA AJLB1023AA AJLB1023AA AJLB1025AA AJLB1025AA AJLB1025AA AJLB1090AA ALB1090AA AJLB1072AB AJLB1090AA AJLB1073AB AJLB1073AB AJLB1090AA AJLB1073AB AJLB1090AA AJLB1073AB AJLB1090AA AJLB1073AB AJLB1090AA AJLB1052AA AJLB1052AA AJLB1052AA	31	AEV93002AB	M10 X 1.5 FLANGE NUT	4
AEV93001AB AEV91002AE AEV91001AB 11548580 AJLB1032AA AJLB1023AA AJLB1022AA AJLB1022AA AJLB1025AA AUB1025AA AUB1090AA AUB1090AA AJLB1090AA AJLB1073AB	32	AEV93003AB	M8 X 1.25 FLANGE NUT	4
AEV91002AE AEV91001AB 11548580 AJLB1033AA AJLB1023AA AJLB1022AA AJLB1022AA AEV91163AA AEV91056AA AEV91056AA AEV9105AA ALB1090AA AJLB1072AB AJLB1072AB AJLB1073AB	33	AEV93001AB	M12 X 1.75 FLANGE NUT	10
AEV91001AB 11548580 AJLB1032AA AJLB1033AA AVB1023AA AJLB1022AA AJLB1022AA 94810A100 AEV91163AA AEV91056AA AEV91016AA AJLB1090AA AJLB1072AB AJLB1073AB AJLB1073AB AJLB1073AB AJLB1073AB AJLB1072AB AJLB1073AB AJLB1073AB AJLB1073AB AJLB1073AB AJLB1073AB AJLB1073AB AJLB1073AB AJLB1073AB	34	AEV91002AE	M12 X 1.75 X 50 BHCS	2
11548580 AJUB1032AA AJUB1033AA AEV91154AA AJUB1022AA 94810A100 AEV91163AA AEV91056AA AEV91056AA AUB1090AA AJUB1090AA AJUB1072AB AJUB1073AB 11588740 AJUB0052AA AJUB0052AA	35	AEV91001AB	M12 X 1.75 X 35 BHCS	2
AJLB1032AA AJLB1033AA AJLB1023AA AJLB1022AA AJLB1022AA 94810A100 AEV91163AA AEV91056AA AEV91016AA AJLB1090AA AJLB1072AB AJLB1073AB AJLB1073AB AJLB1073AB AJLB1073AB AJLB1073AB AJLB1072AB	36	11548580	M4.2 X 1.41 U-NUT	4
ALLB1033AA AEV91154AA AJLB1023AA AJLB1022AA 94810A100 AEV91163AA AEV93027AA AEV93027AA AEV93027AA ALLB1090AA AJLB1072AB AJLB1073AB	37	AJLB1032AA	RH FOG BEZEL	1
ALB1023AA AJLB1022AA AJLB1022AA 94810A100 AEV91163AA AEV91056AA AEV91016AA AJLB1090AA AJLB1072AB AJLB1073AB AJLB1073AB AJLB1073AB AJLB1073AB AJLB1073AB AJLB1073AB AJLB1073AB AJLB1073AB	38	AJLB1033AA	LH FOG BEZEL	1
AJLB1023AA AJLB1022AA 948104100 AEV91163AA AEV91056AA AEV93027AA ALB1090AA AJLB1072AB AJLB1073AB 11588740 AJLB0052AA AJLB0052AA	39	AEV91154AA	NO. 8 X .75" ROUNDED HEAD SHEET METAL SCREW	4
ALLB1022AA 94810A100 AEV91163AA AEV93027AA AEV93027AA ALB1090AA AJLB1072AB AJLB1073AB 11588740 AJLB0052AA	40	AJLB1023AA	LH FOG LIGHT BRACKET	1
94810A100  AEV91163AA  AEV91056AA  AEV93027AA  AEV91016AA  AULB1090AA  AJLB1072AB  AJLB1073AB  11588740  AJLB0052AA	41	AJLB1022AA	RH FOG LIGHT BRACKET	-
AEV91163AA AEV91056AA AEV93027AA AEV91016AA AJLB1090AA AJLB1072AB AJLB1073AB 11588740 AJLB0052AA	42	94810A100	NO. 8 CLIP ON NUT	9
AEV91056AA AEV93027AA AEV91016AA AJLB1090AA AJLB1072AB AJLB1073AB 11588740 AJLB0052AA	43	AEV91163AA	M6 X 1.0 X 25 THREADED STUD	4
AEV91016AA ALB1090AA AJLB1072AB AJLB1073AB 11588740 AJLB0052AA	44	AEV91056AA	M6 FENDER WASHER	4
ALB1090AA AJLB1072AB AJLB1073AB 11588740 AJLB0052AA	45	AEV93027AA	M6 X 1.0 FLANGE NUT	4
AJLB1090AA AJLB1072AB AJLB1073AB 11588740 AJLB0052AA	46	AEV91016AA	M12 X 1.75 X 35 HCS	8
AJLB1072AB AJLB1073AB 11588740 AJLB0052AA	47	AJLB1090AA	WINCH MOUNT REINF SPACER	2
AJLB0052AA	48	AJLB1072AB	RH STEP PAD	1
11588740 AJLB0052AA	49	AJLB1073AB	LH STEP PAD	-
AJLB0052AA	50	11588740	M10 X 1.5 X 40 FLANGE BOLT	8
	51	AJLB0052AA	CAMERA MOUNT ASSEMBLY	-

## I. VEHICLE PREPARATION

NOTE: The factory bumper and air dam removal will vary slightly depending on version. There are multiple different plastic as well as steel bumpers and skidplates offered. the AEV bumper is designed to work with the AEV high-clearance front skidplate and will not fit with factory steel skidplate.

- 1. Remove Factory Air Dam or Skid Plate
  - A. Unbolt the skidplate or air dam from the bottom of the factory bumper and compatibility beam. These will not be reused with AEV bumper or skidplate.
  - B. Unbolt the stamped support/mounting brackets from the compatibility beams. These components will not be reused.

#### 2. Remove OEM Front Bumper

- A. Disconnect the bumper wiring harness from the outside of the passenger front frame horn.
- B. Remove the eight nuts at back-side of the bumper holding the bumper and tow hook assembly to the frame.
- C. Carefully remove the entire bumper assembly, being sure there are no wires or other components snagged during removal.
- D. Save the 4 tow hook support brackets attached to the frame The brackets will be reused with the AEV bumper along with the inner M10 mounting bolts.
- E. Remove the factory fog lights (save hardware) and bumper harness from the factory bumper assembly, they will be reused with AEV bumper.
- F. Reinstall the factory bumper wiring harness across vehicle and wire tie to power steering line for retention of center portion. Leave ends loose for now and tuck them toward rear to prevent pinching during bumper installation (fig. 1).

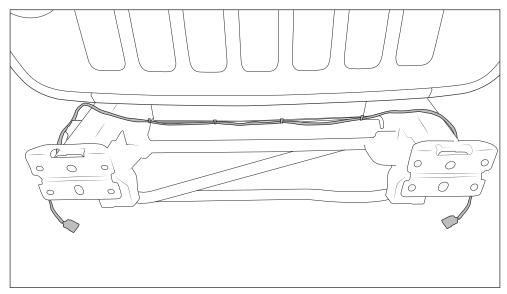


Figure 1

## II. PREPARE MAIN STRUCTURAL WELDMENT

1. Reinstall factory fog lights
Install OEM fog lights to inside of main weldment using provided threaded inserts, u-nuts, and factory
hardware. Place masking or painters tape over the lenses, otherwise they will get damaged during bumper corner installation.

#### A. Sport Halogen:

- i. Install provided U-nuts to outer fairlead stamping as shown (fig. 2).
- ii. Install fog lights and torque OEM screws to 16 in-lb.

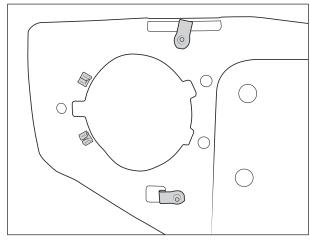


Figure 2

### B. Sport LED:

- i. Install provided U-nuts to fairlead stamping as shown (fig. 2).
- ii. Enlarge mounting holes in fog light housing to 1/4". Be careful not to over-stress housing and crack or break off tabs.
- iii. Install fog lights and torque OEM screws to 16 in-lb.
- C. Plastic Bumper Rubicon/Sahara/Overland LED:
  - i. Install provided U-nuts to fairlead in top and bottom holes as shown (fig. 2)
  - ii. Insert four provided square push-in nuts for each fog light from rear of stamping and bracket as shown (fig. 3).

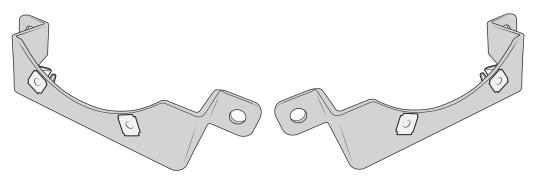


Figure 3

iii. Slide lights into position (make sure they're not upside down) and loosely install the OEM mounting screws through the outer holes. Slide the AEV mounting brackets into place so that the rounded cutout in the brackets faces toward the lights. These brackets are sided, the light mounting pushnuts should be offset slightly toward the top of the bumper (fig. 4-A). Bolt brackets to the fairlead U-nuts using provided M4.2x25 screws to 16 in-lb. (fig. 4-B). Install factory mounting screws to outer holes and torque all screws to 16 in-lb.

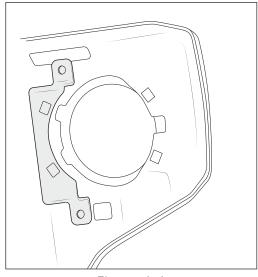


Figure 4-A

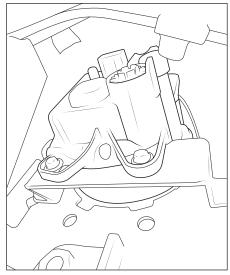


Figure 4-B

- D. Steel Bumper Rubicon LED:
  - i. A. Install provided U-nuts to fairlead stamping as shown (fig. 2).
  - ii. B. Install fog lights and torque OEM screws to 16 in-lb.
- 2. If installing full width EX corners, install U-nuts to rear of main weldment (skip this step for RX narrow corners). Install two M8 u-nuts to each side of the lower angled portion and one M10 to the outer hole at the recessed rear surface (fig 5). These u-nuts are found within the corner kit fastener pack.

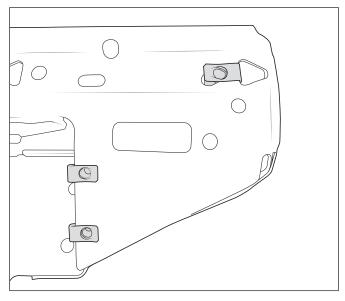


Figure 5



- 3. OPTIONAL: AEV recommends running a tap through all the threaded holes on the weldment to remove any excess coating in threads and ease bolt installation in later steps. Thread sizes are M8-1.25, M10-1.5, and M12-1.75.
- 4. Prepare AEV tow loops by inserting a black M12x150mm bolt with washer through the bottom rear hole of the tow loop with a provided 15mm (0.59") thick spacer (the thinner spacers will be used in another location). If installing EX full width corners, the corner reinforcement bracket (found within corner kit) needs to be installed between the bolt head/washer and the tow loop as shown (fig 6).

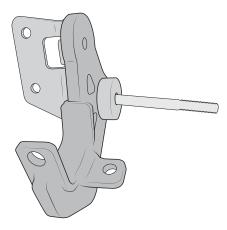


Figure 6: Front Right Side Shown

5. Feed the provided tube spacer crush sleeves (two per side) through the opening in the bottom of the frame compatibility beams one at a time using a telescoping magnet. Feed the tow loop bolt through the frame rail, crush sleeve spacers, and inner frame rail (fig. 7). You can loosely install a flange nut onto the bolt now if you are not installing a winch mount.

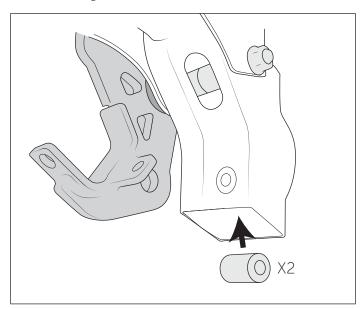


Figure 7: Front Right Side Shown

# III. INSTALL WINCH MOUNT (OPTIONAL)

1. Install M10 riv-nuts using provided tool into the two hex shaped holes on the inboard side of each compatibility beam (fig. 8). To use rivnut tool, run provided bolt through the washer and coupler, then thread on rivnut until snug. Flanged end of rivnut should sit against the coupler. Place rivnut into desired hole, hold coupler stationary with a wrench, and tighten the bolt to 31 ft-lb. Remove the bolt and coupler to make sure the rivnut has full compressed. NOTE: Depending on factory bumper configuration, some vehicles may already have riv-nuts in these locations.

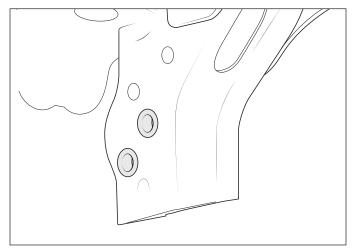


Figure 8

2. Reinstall factory tow hook support brackets to inside of frame rails. Bolt to front frame flange using one M12x35mm bolt and washer from the front and flange nut on the rear. Hardware only needs to be snug to hold bracket in position, it will be removed later (fig. 9).

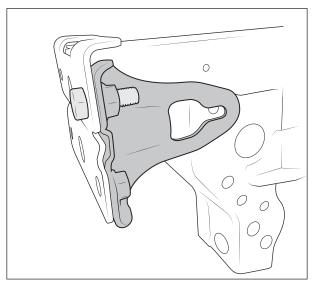


Figure 9

3. Install the winch plate to the frame in the orientation shown (fig. 11). Use supplied M10x40mm bolts to loosely bolt winch plate and reinforcement brackets into the frame weld nuts.

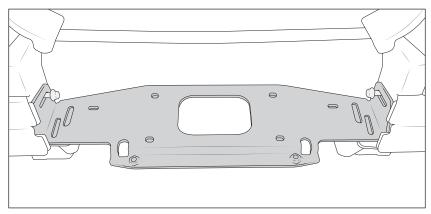
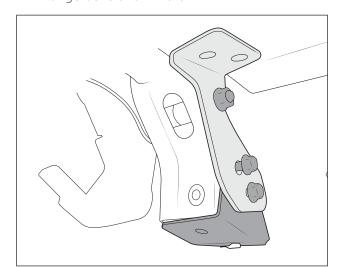


Figure 11

4. Loosely install winch support brackets to the riv-nuts using provided M10x40mm flange bolts and loosely install flange nuts to the M12 tow loop bolts. If installing AEV Front Bumper Skidplate, install the provided mounting brackets between winch support brackets and compatibility beam (fig. 12). NOTE: If installing both the winch mount and front skidplate, there will be four leftover M10x40mm flange bolts and rivnuts.



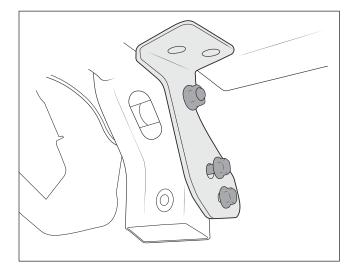
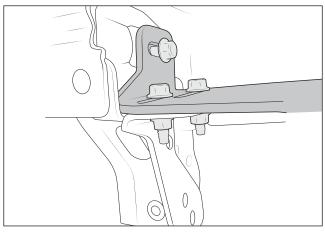


Figure 12: With Skidplate Bracket (left) Without Skidplate Bracket (right)

5. Bolt winch plate in place to the support brackets using the provided M10x40mm bolts and nuts. Bolts should be inserted from the top down. Hand tighten, do not fully torque (fig. 13). NOTE: Due to frame width variations, some installations may need the winch plate mounting tabs bent inward slightly to ease installation. This can be done by placing one end on the ground and hitting the other with a deadblow hammer. Use caution to not damage the coating.

NOTE: If installing AEV Skidplate Light Bar Kit, install provided brackets to the rear bolts tying the winch plate to the support brackets. Light bar brackets should mount with long leg down, inboard, and toward rear of vehicle. Install light bar and hand tighten to hold brackets in proper position (fig. 14).



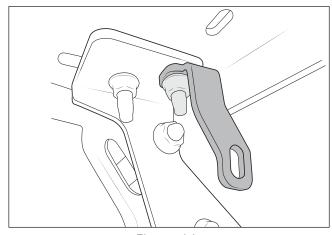


Figure 13

Figure 14

6. Slide winch plate forward so bolts are bottomed against rear of slots on side mounts. Hand tighten all the M10 hardware between winch support brackets and frame riv-nuts. This will set the position of the winch plate and brackets. Once all are hand tight, torque the winch plate to reinforcement bracket hardware to 30 ft-lb, then torque the winch plate side bolts into the frame to 30 ft-lb. Remove the M12 hardware temporarily holding the frame reinforcement brackets to the front frame flanges. This will be reused momentarily.

NOTE: If installing skidplate light bar kit, shift the brackets as far rearward as possible before tightening winch support bolts. On models with electronic sway bar disconnect it will sit tight against the isolator bushing. Tighten the lightbar mounting hardware to manufacturer spec centered in vertical slot on mounting brackets. If using a light bar other than the AEV recommendation, additional adjustments may be needed during skidplate installation

7. Place winch onto winch mount and bolt into place using the hardware provided by the winch manufacturer. It can be wired per the manufacturer's recommendations either now or after final bumper installation (fig. 15) Some larger bodied winches like Warn Zeon 10 will need to be slid in place one end at a time to fit past the frame flanges. Leaving these wider bodied winches loose until after step IV-2 may make that step easier, then bolt them down after that step is completed.

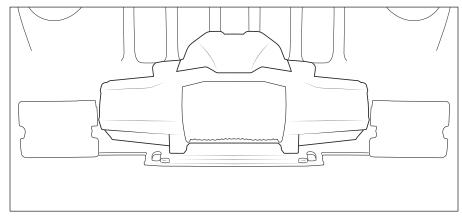


Figure 15

## IV. INSTALL MAIN STRUCTURE TO VEHICLE

1. Install main weldment to vehicle frame. Boxed section of weldment will sit directly on top of frame rail.

NOTE: The main weldment will need to raise up slightly to slide over top of the frame flanges during installation. If the optional winch plate is sitting too low it may interfere with the bumper weldment during this step. If this is the case, remove the main weldment and use a soft mallet or deadblow hammer to raise the front of the winch plate slightly so that the weldment can be installed with the winch plate above the bottom flange of the fairlead stamping. Once the weldment is installed a slight gap to the winch plate is and it will be pulled down flush in a later step. If an excessive gap is present (more than  $\sim 1/4$ ") use the hammer to bring it closer so the main bumper weldment can just barely clear it during installation

2. Install mounting hardware for main weldment (fig. 16). Depending on the winch used(such as Warn Zeon), access to the nuts on bolts 1 and 2 is very limited. They may need to be fed from behind the winch with a socket/extension.

NOTE: If not installing winch mount, reinstall factory tow hook reinforcement bracket to inside of frame rails. Bolt through it for main weldment attachment and reuse factory M10 bolts into frame weld nuts. Torque M12 bolts to specs below and M10 bolts to 30 ft-lb.

- A. Use black M12x35mm button head bolts, washers, and flange nuts in location 1.
- B. Use M12x35mm hex bolts, washers, and flange nuts in location 2
- C. Use M12x35mm hex bolts and washers into the existing weld nuts in location 3.

Torque all M12 hardware to 90ft-lb.

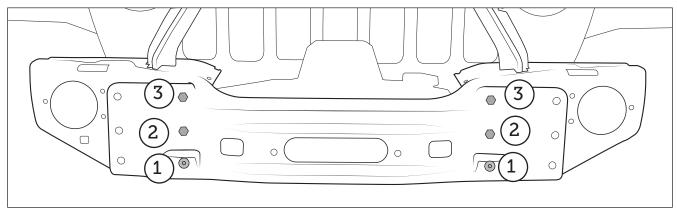


Figure 16

3. Install the tube closeout stampings to the main weldment. Loosely retain them to the weldment with one M8 button head bolt per side of each stamping (fig. 17).

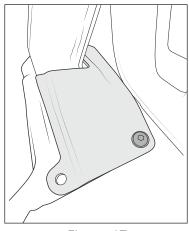


Figure 17

NOTE: If installing the winch delete kit, you can install the top cover plate at same time as tube closeout stampings. The front flange will sit on top of the the fairlead stamping, the side flanges with mounting holes sandwich between the main weldment and the tube closeout stampings. The holes and hardware are shared between the winch delete plate and tube closeout stampings.

- 4. Install plastic cover for bumper hoop and associated components onto the weldment
  - A. If installing AEV offroad lights or camera relocation kit, route the wiring and sprayer hose, running them along the outside of the thick bracket on the hoop weldment and through the openings in the top of the bumper, and out the back along the frame opening. Use provided fur tree wire ties to retain the wiring and hose along the bracket. Make sure to leave enough slack to connect to mating components (fig. 18). See specific instructions for those kits for additional details.

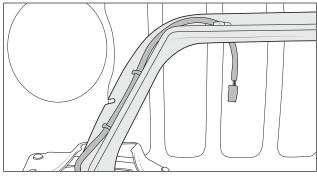


Figure 18

B. Install the provided black M6x20mm threaded studs into the threaded inserts in the back of the plastic bumper hoop cover (fig 19). Use an allen driver to tighten them until fully seated snug into the inserts, then install the plastic hoop cover to the main weldment, being careful not to pinch any wiring or hoses. Install the provided black M6 flange nuts and washers. Make sure the cover is centered on the hoop, and tighten the nuts to 100 in-lb.

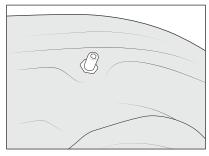


Figure 19

5. Connect fog lights to OEM wiring harness.

## V. INSTALL CENTER STAMPING

1. Install provided (large) M8 U-nuts to the bottom outboard holes of the bumper center (fig 20) and (small) #8 u-nuts to front face around fog light openings (fig 21).

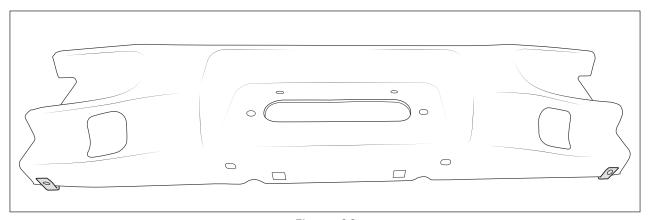


Figure 20

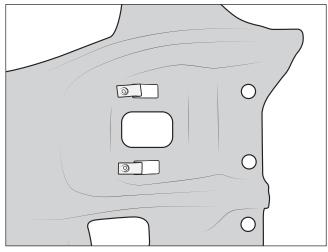


Figure 21

2. Install center section onto front of vehicle. It should pass over the offset front portion of the tube closeout stampings. Center can be retained by passing black M8x25mm button head bolts with washers through the top inboard holes and through the tube closeout stamping. Loosely install black flange nuts from the back side (fig. 22). If using AEV winch plate, remove then reinstall black M10x25 bolts and washers from winch kit through the bottom of the center section and into the weld nuts in the winch plate (see fig. 22). Remove the outer bolts holding the tube closeouts in place so that corners can be installed.

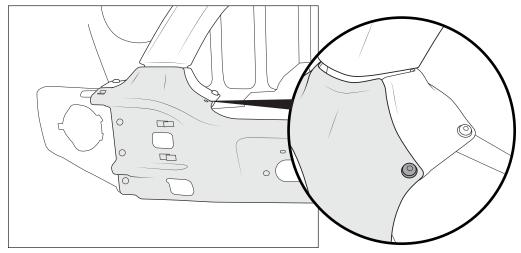


Figure 22

NOTE: If installing the winch delete kit, the center section should shingle over the winch delete plate so that the plate is sandwiched between the center stamping and fairlead stamping. Be careful not to damage the coating while sliding the center stamping over the closeouts.

3. **If installing winch kit**, install AEV fairlead (if applicable) using provided hardware from the back side between the winch body and bumper stampings. Recommend anti-seize on the bolt thread to prevent issues corroding with the steel bolts into aluminum fairlead. Tighten to 40 ft-lb. If using another brand of fairlead, also recommend installing at this time to that manufacturer's specs.

Install black M10x25 bolts and washers from winch kit through the bottom of the bumper stampings and into the weld nuts in the winch plate. As the bolts are tightened they'll pull the winch plate down into its final position. Torque these bolts to 40 ft-lb, then M10 bolts and nuts holding winch support brackets to frame rivnuts to 30 ft-lb, making sure that the skidplate mounting brackets (if applicable) are pushed up tight to bottom of compatibility beams.

## VI. RX CORNER INSTALLATION

- 1. Slide OEM frame reinforcement bracket into place between outside of frame and main bumper weldment. Temporarily retain with factory M10 bolts into weld nut on the side of the frame.
- 2. Carefully install corners over center section and loosely bolt in place with silver M12x35mm hex bolts and washers in the upper and center holes (next to fog light) (fig. 23). Do not install bolts in bottom holes yet. Middle bolt will pass through OEM frame reinforcement bracket.

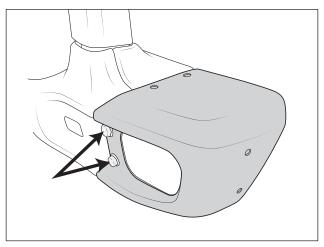


Figure 23

3. Install black M8x25mm button head bolts with washers into each of the weld nuts in the two holes along the top of the corner stamping and two holes through side of corner. A slipper bar may be helpful to align all the holes during bolt installation (fig. 24).

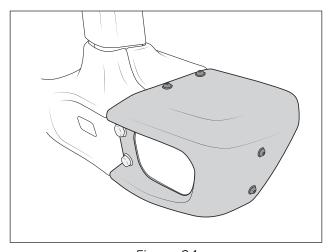


Figure 24

4. Snug all corner hardware by hand(aside from what was left off until future steps), then torque M12 hardware to 90 ft-lb and M8 to 20ft-lb. Remove the M10 bolts that were temporarily used to retain the OEM frame reinforcement brackets

# VII. EX CORNER INSTALLATION (STANDARD & HIGHLINE)

1. Carefully slide corner assemblies in from the side of the bumper, being careful not to damage the fog light lenses as the edge slides across it (this is where the masking tape is critical). Corner outer stamping will shell over center section. Back side of corner weldment will fit tightly against the main weldment, so an extra set of hands may be helpful to guide it over the M8 u-nuts at the rear. A slipper bar can also be helpful to get all the holes aligned (fig. 25). Be careful not to push the corner on too far and don't lift the outer end during installation. This can cause the sharp edge on the corner stamping to damage the coating on the mating pieces and lead to premature corrosion if installed improperly.

NOTE: Make sure corner reinforcement brackets are flipped up so they can be rotated forward to bolt in place in Step IX.4. If they're hanging down when corner is installed they'll need to be removed to get into proper position..

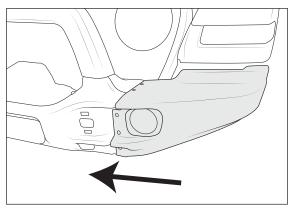
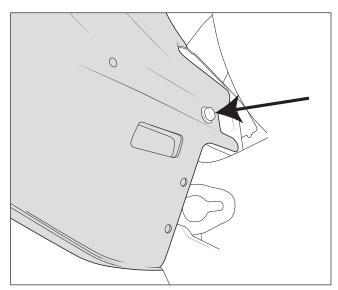


Figure 25

2. Loosely bolt in place beginning with the weld nut locations; rear inner hole with M10x30mm bolt and washer from corner kit (fig. 26), then front upper hole with silver M12x35mm hex bolts and washers (fig. 27), then top two holes with black M8x25mm button head bolts and washers (fig. 28).





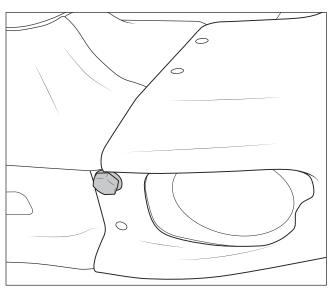
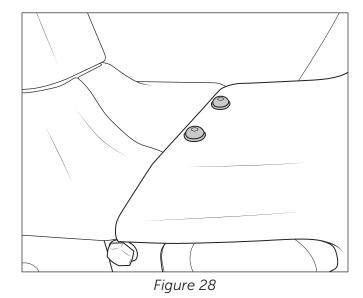


Figure 27



- 3. Slide OEM frame reinforcement bracket into place between outside of frame and main bumper weldment/corners. Temporarily retain with factory M10 bolts into weld nut on the side of the frame.
- 4. Install silver M12x35mm hex bolts and washers to middle hole at front of bumper. Middle bolt will pass through OEM frame reinforcement bracket, then install flange nut from the rear. Install M10x30mm bolt and washer from corner kit to rear outer hole into u-nut. Do not install bolts in front bottom holes yet, or rear inner u-nut locations.
- 5. Snug all corner hardware by hand (aside from what was left off until future steps), then torque M12 to 90ft-lb, M10 to 40ft-lb, and M8 to 20ft-lb. Remove the M10 bolts that were temporarily used to retain the OEM frame reinforcement brackets.

# VIII. INSTALL FRONT SKID PLATE (OPTIONAL)

NOTE: If installing the winch delete kit, install the fairlead cover plate BEFORE skidplate. Install so oval shaped offset faces forward through fairlead opening. Install provided button head bolts with washers from the front side. Install nuts on rear of cover plate and torque until snug. Excessive torque could crack the plastic.

1. Install two provided M8 U-nuts to the bottom flange of the center stamping with the smooth surface on the bottom side (the outer u-nuts were already installed for tow loops). Insert until the threaded hole is centered within the hole in the stamping. (fig. 29)

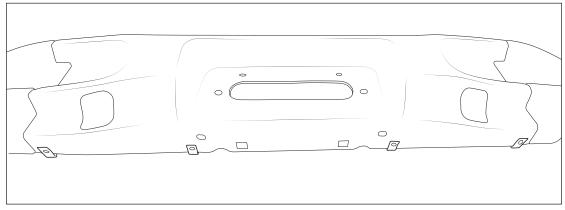
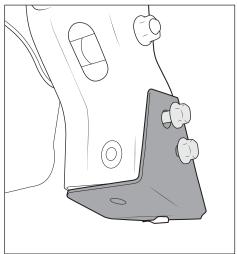


Figure 29

2. If you installed the AEV winch mount, skip to step 5. Install M10 riv-nuts using provided tool into the two hex shaped holes on the inboard side of each compatibility beam (see fig. 8). To use riv-nut tool, run provided bolt through the washer and coupler, then thread on riv-nut until snug. Flanged end of riv-nut should sit against the coupler. Place riv-nut into desired hole, hold coupler stationary with a wrench, and tighten the bolt to 31 ft-lb. Remove the bolt and coupler to make sure the riv-nut has full compressed.

NOTE: Depending on factory bumper configuration, some vehicles may already have riv-nuts in these locations.

- 3. Install provided skidplate mounting brackets using M10 hex bolts and washers from skidplate kit. Hold the brackets tight to the bottom of the compatibility beam and torque bolts to 30 ft-lb (fig. 30).
- 4. Install two provided M8 U-nuts to the bottom flange of the skidplate support brackets so that smooth surface is on the bottom side. Insert until the threaded hole is centered within the hole in the bracket (fig. 31).





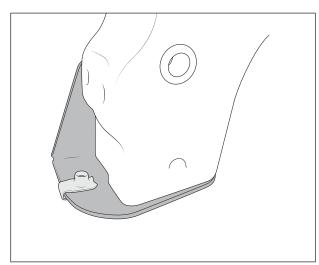


Figure 30 Figure 31

Install the skidplate using four of the provided black M8x25mm button head bolts and washers. Start by loosely installing bolts through lower portion of skidplate into U-nuts from previous step. Then rotate the skidplate up so flat front flange sits flush against bumper center and install only the two inboard front bolts at this time. The outboard mounting bolts will be installed after the tow loops in the next step. Snug all four bolts (fig. 32).

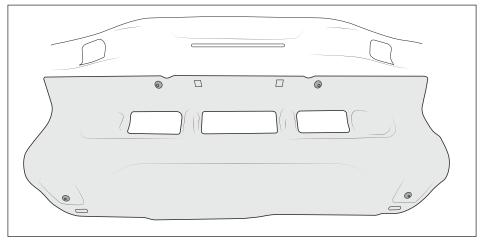


Figure 32

## IX. SECURE TOW LOOPS

1. Rotate tow loops up into final position. Install black M8x25mm button head bolts with washer through the lower tab in the tow loop, through the skidplate, and into the center section U-nut. Install black M12x50mm button head bolt and washer through front hole in tow loop, through bumper and reinforcement bracket, and install flange nut on back side. Torque M12 bolt to 90ft-lb. and M8 bolt to 20ft-lb (fig. 33).

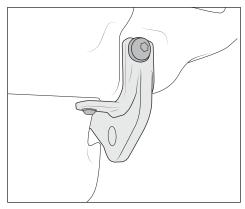


Figure 33

2. Locate the two black M10x45mm hex bolts, washers, and thin 10.7mm (.42") spacers. If equipped with full width EX corners, rotate the corner reinforcement bracket into position. Begin feeding the M10 bolt and washer through from the outside, and sandwich the spacer between the tow loop and bumper reinforcement bracket. Thread the bolt into the factory weld nut in the frame and tighten until snug. On EX Corners, install M8 bolts and washers fromn corner kit and torque to 20 ft-lb (fig. 34). Torque M10 tow loop bolts to 30 ft-lb (fig. 35). Torque side M12 tow loop hardware to 90ft-lb.

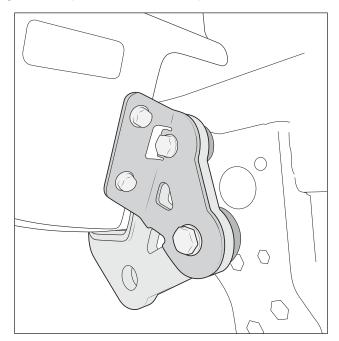
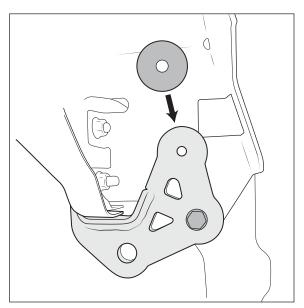


Figure 34



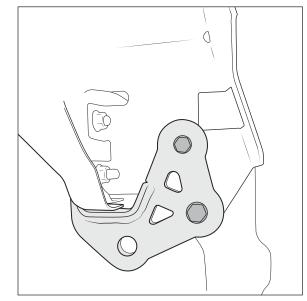
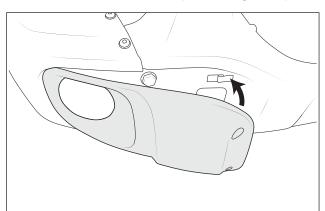


Figure 35: RX Corner shown

# X. INSTALL FOG LIGHT BEZELS AND STEP PADS

- 1. Remove any masking tape on fog light lenses from previous steps.
- 2. Install fog bezels by hooking outer tabs under cutouts in the corner stamping, then install provided black #8 screws through holes in fog bezel and into the U-nuts installed in previous step. Push bezel outward to make sure it fully seats into the corner and snug the screws with a T20 Torx driver. Do not overtighten or the screw head could pull through the plastic bezel (fig. 36)



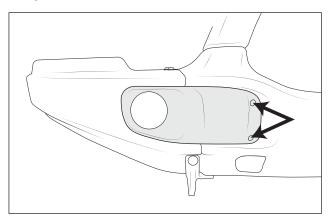


Figure 36



3. Make sure top surface of bumper is clean and dry and install provided adhesive-backed foam step pads as shown (if desired). Be sure to hold in place with strong pressure for at least 30 seconds (fig. 37)

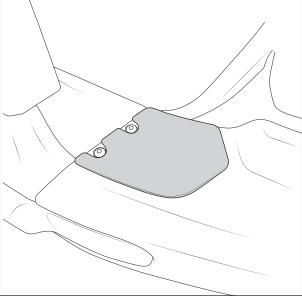


Figure 37

4. If installing other accessories such as camera relocation kit or AEV 7000 series lights, complete those installations now.