



INSTALLATION INSTRUCTIONS

BBWM (BEHIND BUMPER WINCH MOUNT)

Fits 73-80 GM trucks

Part Number: 73-80BBWM

CARELESS INSTALLATION AND OPERATION OF THIS PRODUCT CAN RESULT IN SERIOUS INJURY OR EQUIPMENT DAMAGE. READ AND UNDERSTAND ALL SAFETY PRECAUTIONS AND OPERATING INSTRUCTIONS BEFORE INSTALLING AND OPERATING THIS PRODUCT.

This guide identifies potential hazards and has important safety messages

WARNING, CAUTION, NOTICE, & Note are signal words that identify the level of hazard. These are outlined below:

WARNING signals a hazard that could cause serious injury or death if you do not follow recommendations.

CAUTION signals a hazard that may cause minor to moderate injury if you do not follow recommendations.

NOTICE signals to call attention to important information

Note: to emphasize general information worthy of special attention

CAUTION

PLEASE WORK SAFELY

CAUTION

BEFORE DRILLING INTO ANY VEHICLE CHECK THAT THE AREA TO BE DRILLED IS CLEAR OF ANY WATER LINES, FUEL LINES, ELECTRICAL WIRING, OR KEY MECHANICAL EQUIPMENT. ALWAYS USE CAUTION WHEN DRILLING OR CUTTING ON A VEHICLE.

WARNING

FAILURE TO INSPECT THE AREA TO BE DRILLED MAY RESULT IN VEHICLE DAMAGE, OR PERSONAL INJURY.

WARNING

WEAR APPROPRIATE PPE WHEN INSTALLING THIS KIT: GLOVES, HEARING PROTECTION, SAFETY GLASSES/GOGGLES.

Note:

Thank you for your purchase of the **Engineered Vintage 73-80 GM truck Behind Bumper Winch Mount Kit (BBWM)**

Please read these instructions completely before installation of this kit.

These instructions are intended to convey information on how to best mount this kit onto your truck.

This kit is designed to bolt into 1973-80 GM trucks and/or 1973-80 GM Blazers, Suburbans, & Crew cab trucks (commonly referred to as square body trucks).

This kit requires drilling of two ½” holes during installation (covered in these instructions) With variations in these trucks, some trucks may require drilling and/or grinding of frame and/or the Engineered Vintage frame brackets for complete fit-up.

This kit was designed to mount a variety of winch models onto these trucks and allow the winch to be mounted in a “high-mount” configuration or a “low-mount” configuration. This kit is compatible with Engineered Vintage’s Shackle Bracket tow hooks as well as the OEM 73-80 GM tow hooks (and 73-80 hooks on Suburbans, Blazers, & Crew cabs)

NOTE: this mount is designed to mount winches upside down, *contact your winch manufacturer on operation and capability of mounting your particular winch upside down.*

There is possibility with a low-profile winch mounted in “low-mount” configuration and install of a 1” (or taller) body-lift on the truck to mount “some” winches upright with winch cable exiting through bumper - this will require cutting of stock bumper for winch cable & drilling holes to mount fairlead and may also require modification of the BBWM components. Considerations must be made for access to winch controls as well. This type of install is covered briefly at end of these instructions.

High-mount config – winch mounted upside down.

winch line exits through bumper / requires cutting hole in bumper. Allows use of roller or hawse style fairlead



Low-mount config – winch mounted upside down

winch line exits under bumper / no cutting of bumper required. Requires use of hawse style fairlead



Low-mount config – winch mounted upright

Requires body lift on truck or modification to winch or core support of truck

May require considerations for winch control access

Winch line exits through bumper / requires cutting hole in bumper. Allows use of roller or hawse style fairlead



PARTS LIST

Standard Kit

QTY	DESCRIPTION
-1-	INNER FRAME BRACKET, DRIVER (LH)
-1-	INNER FRAME BRACKET, PASSENGER (RH)
-1-	WINCH PLATE

Upgraded Kit

QTY	DESCRIPTION
-1-	INNER FRAME BRACKET, DRIVER (LH)
-1-	INNER FRAME BRACKET, PASSENGER (RH)
-1-	WINCH PLATE
-1-	LOW MOUNT CONFIG BRACKET, DRIVER (LH)
-1-	LOW MOUNT CONFIG BRACKET, PASSENGER (RH)
-2-	SPACER PLATES, 1/4" THICK
-2-	SPACER PLATES, 5/16" THICK

HARDWARE LIST:

ID	Qty	Description	Where Used
A	4	5/8-11 UNC GR 8 BOLTS, 2.5" LONG (with shackle brackets or stock tow hooks) *OR* 5/8-11 UNC GR 8 BOLTS, 2" LONG (if no Shackle Brackets)	Kit will come with (4) 2" long or (4) 2.5" long bolts depending upon configuration ordered. These bolts are used in bottom two front frame holes, used to secure winch bracket, inner frame bracket, stock bumper mount, and Engineered Vintage Shackle Brackets (sold separately) to frame
B	1	5/8-11 UNC GR 8 BOLT, 1.5" (or 2") LONG	Used in rear of driver side frame bracket to secure frame bracket to stock frame cross-brace
C	6	5/8" WASHER	Use (1) 5/8 washer with all each 5/8 bolt except where noted (frame cross member uses 2 washers)
D	5	5/8" LOCK WASHER	Used with all 5/8" bolts (1 per bolt)
E	5	5/8 NUT	Used with all 5/8" bolts (1 per bolt)
F	2	1/2-13 UNC GR 8 BOLTS, 2.5" LONG *OR* 1/2-13 UNC GR 8 BOLTS, 2" LONG	Used in top front frame holes to secure inner frame bracket, stock bumper mount, and Engineered Vintage Shackle Brackets (sold separately) to frame Kit will come with (2) 2" long or (2) 2.5" long bolts depending upon configuration ordered.
G	8	1/2-13 UNC GR 8 BOLTS, 2" LONG	(2) used in drilled frame hole, secures winch bracket, inner frame bracket through frame and core support mount (4) used to secure winch plate to winch brackets (2) used to bolt winch bracket and stock bumper mount to top side frame hole
G	4	1/2-13 UNC GR 8 BOLTS, 1.5" LONG	(2) used in drilled frame hole, secures winch bracket, inner frame bracket through frame and core support mount (4) used to secure winch plate to winch brackets (2) used to bolt winch bracket and stock bumper mount to top side frame hole

H	20	1/2" SAE WASHER (Yellow Zinc)	Use (2) SAE yellow washers with all 1/2" bolts except where noted
I	10	1/2" LOCK WASHER	Used with all 1/2" bolts except where noted (1 per bolt)
J	10	½ NUT	Used with all 1/2" bolts (1 per bolt)

Bolts from truck that should be reused (not included in hardware kit)

L	4	7/16 UNC GR 8 BOLTS, 1.5" LONG	Used in rear of inner frame bracket to secure stock outer bumper stiffener bracket
M	4	7/16 WASHER	Used with 7/16" bolts (1 per bolt)
N	1	7/16" steering box bolt	Used to secure inner frame bracket through frame into steering box

Installation prep / installation of Standard Kit / high-mount configuration



WARNING As these trucks are over 40 years old, before installation of this kit the front frame rail ends should be inspected to ensure rigidity and ability to securely hold this winch mount. If there are rust holes or there is other physical damage to frame, then frame should be professionally repaired before installation of this product.

If mounting this kit in a 2wd truck or truck without factory tow hook holes drilling of the frame may be required.



WARNING Drilling operations can cause flying chips. **WEAR SAFETY GOGGLES.** Flying chips can cause eye injury.

Recommend spraying all bumper hardware, tow hook bolts (if equipped), steering box bolt, and cross-member bracket bolts with penetrating oil or "bolt loosening spray" the night before installation to ease bumper removal from truck. Bumper hardware can be difficult to remove with rust, road grime, etc accumulated over time on truck.



Remove factory tow hooks from truck.

Remove the front bumper from truck. This requires removal of six ½" bolts (¾" socket/wrench required)

Stock bumper mounting brackets – these must be removed for install, but will be re-used

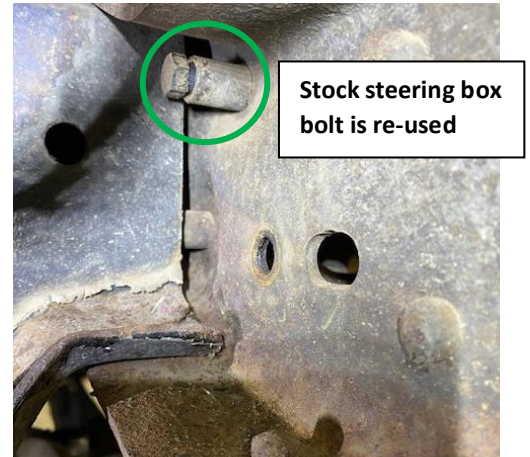
Remove the bumper brackets & outer bumper braces from the bumper (or frame of truck) clean and set aside



Recommend cleaning bumper bolts / chasing threads so that installation of bumper is easier. If bolts are significantly rusty or damaged it is recommended to purchase new bumper hardware.

Once bumper is removed, it is recommended to clean inner frame of grease and debris with pressure washer and/or degreaser.

Remove top front steering box bolt (requires 5/8 socket / wrench) Clean and set aside this bolt (green circle) as it will be reused. Stock steering box Spacer tube will not be reused.



If your truck is equipped with an engine oil cooler, there may be an interference with the BBWM. The oil cooler hoses (circled in red) should be loosened and be rotated up (towards engine) slightly to clear the winch plate & driver side frame bracket. It may also be necessary to loosen the clamp on the stock front cross-member to allow hoses freedom to move. Once winch plate is installed – make sure these hoses are not rubbing on winch plate. If there is contact, recommend adding a hose protector to ensure line is safe.



One possible hose protector option (not included in this kit) available at NAPA Hose Protector / Part #: BK7321205 (shown at right)

Hose Protector Plastic

Part #: BK 7321205
Line: Balkamp



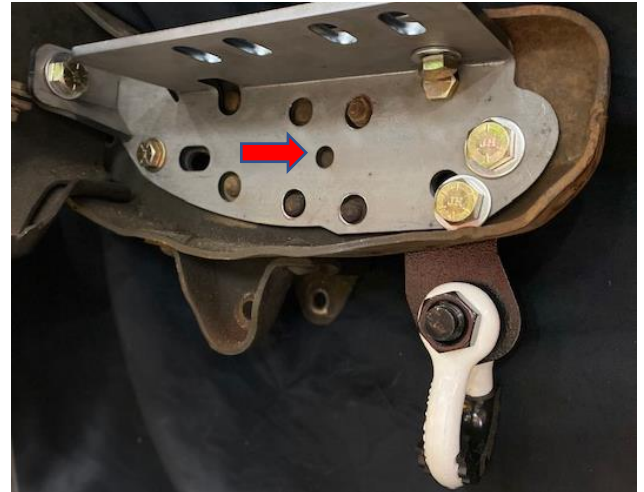
Once steering box bolt has been removed, oil cooler lines are safe and frame is clean, test fit driver side inner frame bracket into frame rail.

Loosely install **steering box bolt first**, then rear cross-member bolt, bumper stiffener bolts, and front frame bolts. Check that inner frame bracket is flush with inside of frame rail at all locations. Once location is correct, tighten bolts to keep bracket from shifting.

Next, begin drilling hole into frame between core support rivet mounts (red arrow in pic) using hole in inner frame bracket as drill guide

CAUTION

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WARNING

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Mark the hole center location with a 1/2" diameter drill bit, and then switch to a smaller drill bit and drill pilot hole through frame.

Drill out hole, stepping up in size with larger & larger drill bits until hole is 1/2" in diameter. Deburr drilled hole with larger drill bit or small grinding wheel

Repeat drilling steps for opposite side of frame **using opposite side frame bracket**

Start with 1/2" bit to mark hole



Once hole is drilled, begin installation of inner frame bracket. Install bolts circled in picture at right (4 total).

Double check that inner frame bracket is flush against inside of frame rail at front, back, top, and bottom.

Repeat these steps for passenger side, drilling hole in passenger frame rail (red arrow) as described in this section.

Once these steps are completed, determine which mounting configuration is desired (see page 2) and proceed to the appropriate section for installation.



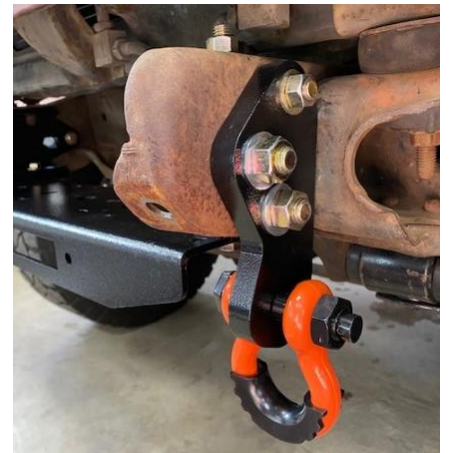
High Mount configuration install

NOTICE The High Mount configuration requires cutting of the stock bumper and installation of a roller or hawse fairlead on the bumper. If heavy side-pull winching is commonly done with this vehicle then it is recommended to reinforce backside of stock bumper to winch mount plate to avoid damaging/warping stock bumper.



- 1) Starting with driver side, from prior installation steps, install all washers, lock washers, and nuts onto all bolts.
- 2) If Engineered Vintage Shackle brackets (sold separately) are going to be installed or OEM tow hooks are to be used, install them at this time as well, using top frame bolt hole and nut to temporarily hold them in place.
- 3) Install bolts in numerical order shown below (**starting with steering box bolt**, then topside frame bolt and front frame bolt) Double check that bolt is threaded into steering box correctly before tightening this bolt.

Bolt 5 uses the outer bumper brace to tighten against – this bolt should be loosely installed at this time.



Tighten all bolts (except #5 – which should be snug, but is tightened after bumper is installed) in numerical order to torque specs listed below:

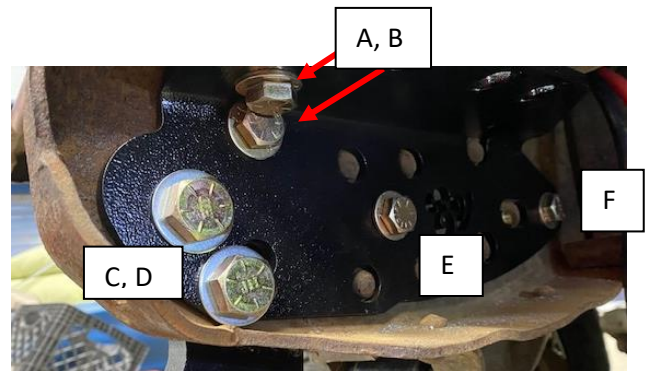
- Steering box bolt: 70 ft-lbs
- Bolt 2s: 80 ft-lbs
- Bolts 3 through 8 (1/2" bolts): 100 ft-lbs



4) Repeat for passenger side.

Note the bumper bracket and Engineered Vintage Shackle bracket are also installed during this step.

Tighten all bolts in alphabetical order (except bolt "F" – which should be snug, but is tightened after bumper is installed) in alphabetical order to torque specs listed below:



Bolt A-F: 100 ft-lbs

- 5) Once all bolts are installed, install winch plate into frame brackets (do not install winch yet)
- 6) Check winch plate for interference with any area of truck (radiator, oil cooler lines, block heater, etc...)
- 7) Once location of winch mount is set, re-install bumper onto truck and tighten bumper bolts. Make sure that bumper is installed correctly and level and the four center bumper bolts are snug. Once bumper is ensured to be installed correctly, it is time to mark the bumper for cutting. (Recommend using socket with extensions and swivel or shorty end wrench to install bumper bolts)

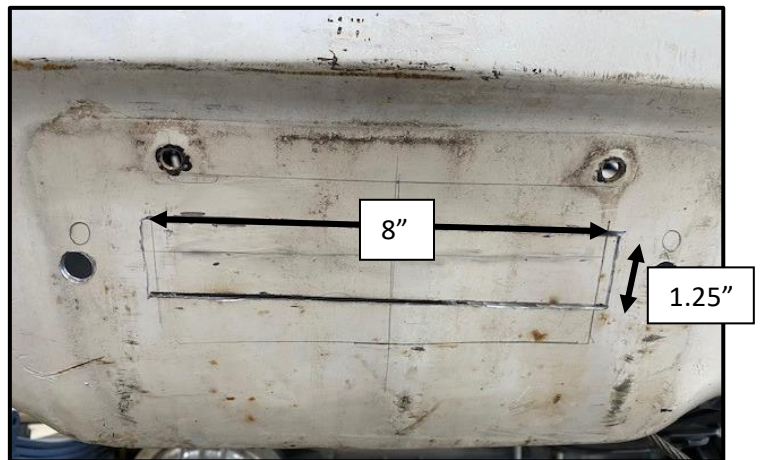


NOTE - the next steps should be done with care and are for roller fairlead – hawse fairlead install is similar but dimensions may differ depending upon manufacturer.

8) Take a long pencil and holding it along winch plate, mark the back of the bumper – the full width of the license plate holes. Once mark is clear, remove bumper from truck. Measure down $\frac{3}{4}$ " of an inch from the original mark – and make a second line on back of bumper below the first line. This second lower line corresponds to the opening in the winch mount plate.



9) Next, transfer these lines to the front of the bumper – it is recommended to use masking or painter's tape on the front bumper to aid in making the lines. Mark the center of the bumper – use the license plate holes as guide to find center.



10) The cut in the bumper should be a rectangle 8" wide x 1.25" tall. Mark vertical cuts by centering 8" dimension between license plate holes

11) Once cut is marked, place fairlead onto bumper and double check that all four lines are just outside the tops of the rollers (hole in bumper should be slightly larger than roller fairlead opening) Trace the fairlead mounting holes onto the bumper

12) NOTE: Triple check measurements, fairlead fit-up, etc and cut bumper

CAUTION

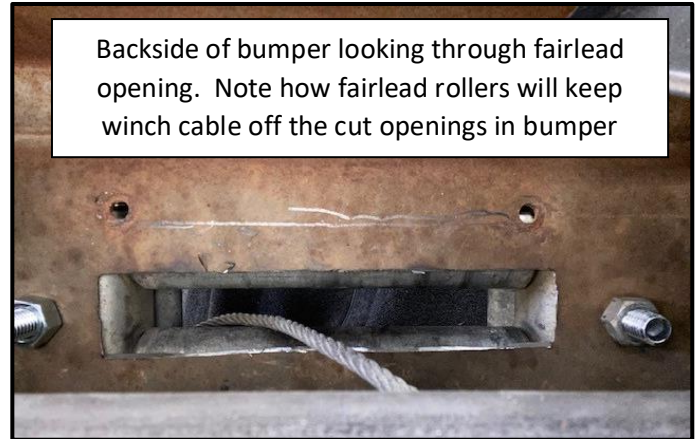
Cutting metal – can cause sparks, chips, etc... Use correct personal protective equipment & make sure area behind bumper is free of hazards

13) Drill the holes to mount the fairlead using a drill bit corresponding to the diameter of the fairlead bolts (these can be 3/8", 7/16" or 1/2" bolts depending upon the particular winch or fairlead being used)

14) Install Fairlead onto bumper with fairlead hardware – if bumper is off of truck – reinstall stock bumper

15) Check that all bolts are tightened

16) Install is complete



NOTICE

If your state requires your vehicle to have a front license plate, there are many options available online for mounting a license plate to roller fairlead or under/above roller fairlead.

Completed install in high-mount config shown below with different winches



Installation shown with Smittybilt 12K X20 Gen 3 winch & Smittybilt hawse fairlead

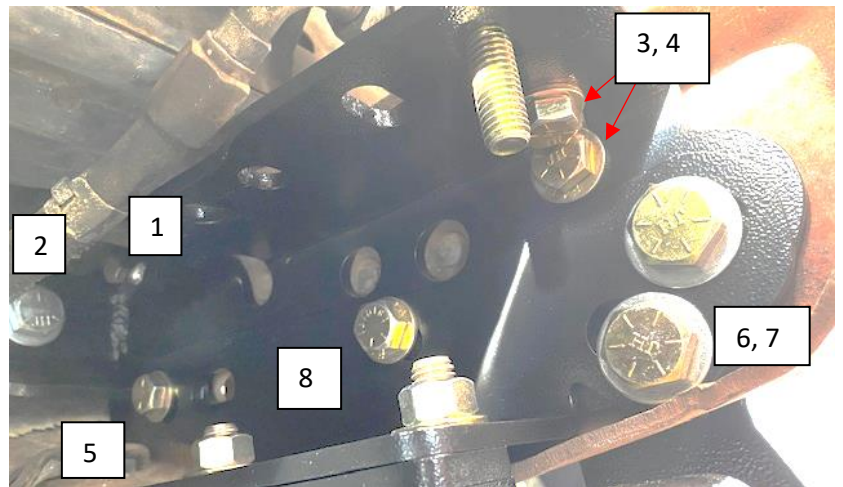


Installation shown with WARN VR EVO 8K, WARN Hawse fairlead, relocated control box & flip up license plate holder

Low Mount configuration install / winch upside down (Upgraded Kit only)

NOTICE The Low Mount configuration in the Upgraded Kit installs winch with winch cable exiting just under stock GM front bumper. This configuration provides optimum space for large winches – but the trade-off is ground clearance from winch to truck. This configuration does not require cutting of hole in stock bumper for winch cable.

- 1) Starting with driver side, from prior installation steps, inner frame bracket should be tight to frame with no gap/or interference – place low configuration mount bracket tight against inner frame bracket.
- 2) Hold brackets tight to frame and install bolts, washers, lock washers, and nuts through brackets and frame. Snug down the nuts as much as possible so that the two brackets do not move.
- 3) If Engineered Vintage Shackle brackets are going to be installed or OEM tow hooks are to be used, install them at this time as well, using top frame bolt hole and nut to temporarily hold them in place
- 4) Install bolts in order shown, **starting with steering box bolt #1**, Double check that bolt is threaded into steering box correctly before tightening this bolt. Bolt 5 uses the outer bumper brace to tighten against – these should be loosely installed at this time.



Tighten all bolts (except #5 which should be snug, but is tightened after bumper is installed) in numerical order to torque specs listed below:

- Steering box bolt: 70 ft-lbs
- All other bolts: 100 ft-lbs
- Bolts 3 & 4 (3/8 bolts): 30 ft-lbs
- Bolts 7-9: 100 ft-lbs

Move to Passenger side:

Install bolts in number sequence shown in picture. Bolt 5 uses the outer bumper brace to tighten against – these should be loosely installed at this time. Note that on passenger side, there is no bolt 1, nor 2

Tighten all bolts (except #5 which should be snug, but is tightened after bumper is installed) in same numerical order to torque specs listed below:

- Bolt 2s: 100 ft-lbs
- Bolts 3 & 4 (3/8 bolts): 30 ft-lbs
- Bolts 7-9: 100 ft-lbs

5) The stock bumper bracket and Engineered Vintage Shackle bracket (or OEM tow hook) are also installed at this time.

6) Once all bolts are installed, install winch plate into frame brackets (do not install winch yet)

- Note that winch plate can be mounted in forward position or more rear position
- Add the 1/4" & 5/16" thick spacers on each side (one 1/4" & one 5/16" spacer each side)
- This will space winch plate and fairlead down to clear bottom of truck's bumper.
 - Use (4) 2" long 1/2" bolts to attach winch carrier to frame brackets.
 - *While 2" long bolts are supplied – note that installer may need to use different length bolt(s) depending upon winch clearance.*
 - Use (8) 1/2" washers – one under bolt head & one under lock washer
 - Use (4) 1/2" lock washers
 - Use (4) 1/2" nut
 - Tighten & torque all bolts
 - **Torque 1/2-inch bolts to 100 LB. FT**

7) Install Fairlead onto winch plate

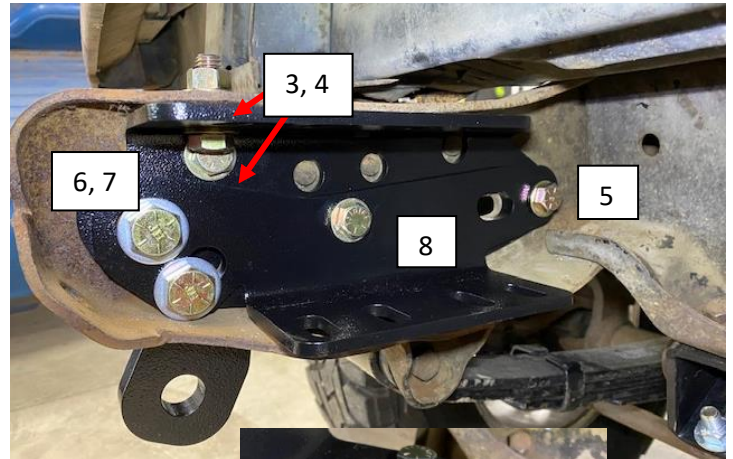
a. Use (2) 2" long 1/2" bolt

b. Use (2) 1/2" nut

i. If fairlead uses different sized hardware obtain correct hardware from hardware store

IT IS RECOMMENDED TO HAVE ASSISTANCE FOR LIFTING FOR THE NEXT STEP TO AVOID DROPPING WINCH OR CAUSING INJURY

8) Once all bolts are installed, install winch plate into frame brackets (do not install winch yet)



Note install of one 1/4" thick & one 5/16" thick spacer

- 9) Mount the winch and feed cable through winch plate, bumper, and fairlead. Wire up winch per winch instructions
 - a. If your particular winch has removable control box (check with winch manufacturer) it is recommended to move it for ease of access.
- 10) Reinstall stock outer bumper braces
- 11) Double check that all bolts are tightened and torqued
 - a. Torque 1/2-inch bolts to 100 LB. FT
- 12) Install of low mount configuration is complete.



Installation shown with WARN VR EVO 8K – recommend relocation of Solenoid box per WARN's instructions

Recommended care:

Regular washing with fresh water and mild car wash detergent followed by rinsing and drying with a soft towel is the best minimum care. Beyond that, any cleaner/wax recommended for automotive finishes will work well to remove minor stains and scuffs and provide protection.

What winches are compatible with this kit?

Winches with a 10" x 4.5" foot down bolt pattern that are less than 24" long should work with this kit in both the high & low mount configurations. If mounting in low configuration, any winch with a 10" x 4.5" bottom down bolt pattern should work. If mounted in high configuration, the limitation will be the width between the frame rail on the truck. On a typical GM truck, this dimension is about 24" at narrowest part of frame rails & about 28" measuring inside to inside of the frame rails. The height of the frame rails is about 5". The length of the winch must fit within these dimensions.

Compatible winch list *(for configurations with upside down mounted winches only)*

WARN winch fitment:

- **VR EVO series will fit**
- **ZEON series require some frame trimming to fit (winch is wide)**
- **9.5XP will fit**
- **9.5XP-S will fit**
- **9.0RC will fit**
- **XD9 will fit**
- **XD9I will fit**
- **M8 will fit**
- **M8-S will fit**
- **HS9500i will fit**
- **9.5ti will fit**
- **9.5si will fit**
- **M12 will not fit**
- **M15 will not fit**
- **M16.5 & up will not fit**
- **M8274 & older M8074 will not fit**
- **Powerplant winches ("air compressor winch") may fit – but check with WARN on running it upside down**
- **WARN ATV winches will not fit**

Harbor freight / BADLAND winches:

- **Apex series will fit**
- **ZXR series will fit**
- **ZXR ATV winches will not fit**

Smittybilt winches:

- Most X2O series will fit – except call for 15.5K and/or 17K
 - Winch plate may need to be modified to accommodate winch depth
- Most XRC series will fit – except call for 15.5K and/or 17K
 - Winch plate may need to be modified to accommodate winch depth
- **Smittybilt ATV winches will not fit**

Sherpa winches:

- **Mustang 9.5K will fit**
- **Brumby 10K will fit**
- **Colt 12K will fit**
- **Mule 17K dual motor will not fit**
- **Steed 17K may fit (trimming of frame may be required)**
- **Stallion 25K will not fit**
- **Air compressor winch will not fit**
- **ATV winches will not fit**
- **Grunter Boat trailer winch will not fit**

COMEUP Winches:

- **Seal Gen2 Series will fit**
- **Seal Gen2 9.5rsi will fit**
- **Seal Gen2 9.5si will fit**
- **Seal Gen2 9.5i will fit**
- **Seal Gen2 12.5 will fit**
- **Seal Gen2 12.5s will fit**
- **Seal Gen2 12.5rs will fit**
- **GIO series will fit**
- **Seal Slim series will fit**
- **Seal Gen2 16.5 models will not fit**
- **Seal Gen2 20.0 models will not fit**

COMEUP Winch, DV series:

- **12-light (and down) will fit**
- **Seal MadX series will fit**
- **Cap 9.0s will fit**
- **DV-12 will not fit**
- **DV-15 will not fit**
- **DV-18 will not fit**
- **Blazer M2 will not fit**
- **Blazer M3 will not fit**
- **Utility Duty winch series will not fit**

Ramsey Winches

- Electric winches 12K capacity and down will fit
- Patriot 15000 will not fit
- Planetary Hydraulic Winches will not fit
- Worm Gear Winches will not fit

SuperWinch

- SX10 will fit
- SX10SR will fit
- SX12 will fit
- SX12SR will fit
- Talon 9.5, 9.5SR, 9.5i, 9.5iSR, 12.5, 12.5R, 12.5SR will fit
- Tiger Shark 9500, 9500SR, 11500, 11500SR will fit
- Tiger Shark 13500, 15500, & 17500 will not fit
- Talon 18 models will not fit

TBD (reach out if you have a question on these brands)

- Mile Marker
- X-bull
- Rough Country
- Monster / Iron man
- Traveller

Low Mount configuration / winch upright install

Installation of this configuration should be done by experienced mechanic onto modified rig. Cutting of winch mount and/or truck frame and fitting of winch in this configuration may be required.

Winch fit-ups listed in these instructions may not fit in this configuration.

Approx clearance for winch is approximately 24" wide x 6" tall x 7.25" deep

Winches with dimensions larger than this may have clearance issues.

NOTICE The Low Mount configuration / winch upright installs winch with winch cable exiting through stock GM front bumper. This configuration requires cutting of the stock bumper and installation of a roller or hawse fairlead on the bumper. If heavy side-pull winching is commonly done with this vehicle then it is recommended to reinforce backside of stock bumper to winch mount plate to avoid damaging/warping stock bumper.

NOTICE Consideration must be made on operation of winch in this configuration. Extension of clutch lever and clocking of winch ends may need to be considered – there are numerous resources online on how to do this.

NOTICE As clearance between winch plate and bottom of core support is limited, it is recommended to install this configuration on truck with 1-2" (or greater) body-lift or notched core support. Vertical clearance between core support and winch plate for winch is approximately 5-3/4" (most winches are 6.4" to 7.5" tall)

NOTICE Horizontal winch dimensions must also be considered – it may be necessary to notch or cut the Engineered Vintage frame brackets for correct clearance.

Note that it is recommended to install a smaller size winch (like a WARN 9.0rc or M8000, or XD9) in this configuration. It is recommended to check winch dimensions and truck clearances prior to installation.



- 1) Follow instructions for Low-mount configuration installation (steps #1 through #5)
- 2) Instructions for notching of core support or installation of body-lift are not covered. Take care when cutting or modifying truck.
- 3) Install winch plate using provided 2" x 1/2" long bolts – use provided 5/16 & 1/4" spacers between low configuration mount brackets and winch plate to allow for more space between top of winch and bottom of truck core support.

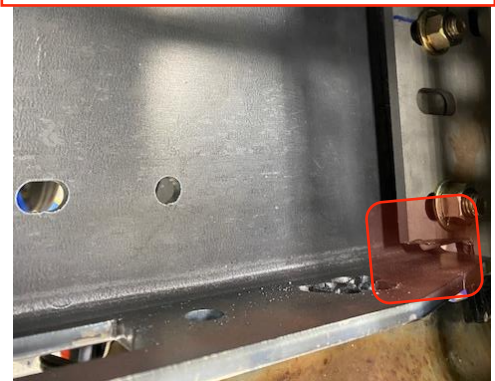
May be necessary to notch Engineered Vintage BBWM frame brackets in these areas for winch clearance



Installation shown with M8 winch



BBWM brackets may need to be modified in red highlighted areas to mount in this configuration



As always, if you have concerns, questions, or issues with our products, please contact us.

-Ben

President
Engineered Vintage, LLC

Thank you and check out our other products at:

EngineeredVintage.com

