

INSTALLATION INSTRUCTIONS

BBWM (BEHIND BUMPER WINCH MOUNT)

For 67-72 GM trucks

Part Number: 6772BBWM

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:

MWARNING 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.

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

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

Note:

Please read these instructions completely before installation of this kit.

This kit is designed to bolt into 69-72 4x4 GM trucks equipped with factory tow hook holes. This kit will fit all 1967-72 trucks, but some trucks may require modification for this kit to fit. Some vehicles may require drilling and/or grinding of frame and/or the Engineered Vintage frame brackets for complete fit-up.

Thank you for your purchase of the **Engineered Vintage 67-72 GM truck Behind Bumper Winch Mount Kit (BBWM)**

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 various styles of OEM 69-72 GM tow hooks.

NOTE: this mount is designed to mount winches upside down in truck, <u>contact</u> <u>your winch manufacturer on operation and capability of mounting your particular</u> <u>winch upside down.</u>

While not covered in these instructions, there is possibility with a low-profile winch mounted in "low-mount" configuration and/or a 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 roller or hawse fairlead.



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

PARTS LIST

QTY	DESCRIPTION

-1- FRAME BRACKET, DRIVER	(LH)
---------------------------	------

- -1- FRAME BRACKET, PASSENGER (RH)
- -1- WINCH PLATE
- -4- SPACER PLATES, 1/4" THICK

HARDWARE LIST:

Identifier	Qty	Description	Where Used
Α	6	5/8-11 UNC GR 8 BOLTS, 2.5" LONG	Used to mount BBWM frame brackets to frame
В	6	5/8-11 NUT	Can also can be used to mount Engineered Vintage Shackle Brackets
С	6	5/8 WASHER	
D	6	5/8 LOCK WASHER	(available separately) with BBWM
E	8	½-13 UNC GR 8 BOLTS, 2" LONG	(4) Mounts winch plate to frame brackets(2) Frame bracket core support hole to frame and bumper brace(2) Low Config only - mounts hawse fairlead to winch plate
F	2	1/2-13 UNC GR 8 BOLTS, 1.5" LONG	(2) Low Config only, bottom rear frame bracket hole to rear frame
G	10	½ NUT	Used with bolts in "E & F"
н	20	½ WASHER	 (8) Mount winch plate to frame bracket (2 per bolt) (4) Frame bracket core support hole to frame & bumper brace (2 per bolt) (4) Low config, bottom rear frame bracket hole to rear frame (2 per bolt) (4) 67-68 Low config only, spacers between bottom rear frame bracket hole and frame (2 washers used as spacers per bolt + washers from above)
J	8	½ LOCK WASHER	Used with bolts in "E"
К	2	1" long FAIRLEAD SPACER TUBE	(2) Low Config only – used to extend out hawse fairlead from winch plate

EVALUATE TRUCK & FRAME ENDS



As these trucks are ~50 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.

This product requires 4 holes to mount in the frame for the high mount configuration & 5 holes to mount in the low mount configuration for each bracket. If mounting this kit in a 2wd truck or truck without factory tow hook holes drilling of the frame may be required.

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

1969-72 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 OR installing the BBWM in Low Mount Configuration to avoid damaging/warping stock bumper.

- Remove front bumper from truck. Requires removal of (6) ¹/₂" bumper bolts. ³/₄" socket/wrench required. Set bumper hardware aside
- Remove outer bumper braces from frame of truck if not removed in step 1
- 3) Starting with driver side, place frame bracket onto frame and check for interference frame bracket should rest tight against frame.
- 4) For high mount configuration, install four bolts (three 5/8" bolts & one ½" bolt)
 - a. If you are mounting this onto a 2wd truck or a 4wd truck without factory tow hook holes, installation of this kit may require drilling. To drill frame:
 - Place bracket on frame, insert a 5/8" bolt in front frame hole & push bracket towards rear of truck until bolt stops bracket (Fig 1) install nut
 - ii. Locations of 5/8 holes on frame should marked as shown in **Figure 1**

NOTE: An Engineered Vintage Shackle Bracket tow hook can also be used to line up 5/8" frame holes and drill holes – see instructions for that kit.

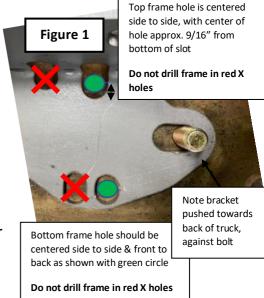
- iii. Mark the hole locations with a 5/8" diameter drill bit, and then switch to a smaller drill bit and drill pilot hole through frame.
- iv. Drill out holes, stepping up in size with larger & larger drill bits until green marked holes in Figure 1 are 5/8" diameter.



Driver side frame bracket in high mount configuration



Passenger side frame bracket in high mount configuration



v. To drill the rear 1/2" hole, refer to Figure 2

Note location of rear $\frac{1}{2}$ " hole – if two lines were drawn across hole location from center to center of rivets forming a "X" (see lines in Figure 2) the hole location would be at intersection – this is also in top of slot as shown in picture. Mark the hole center and drill a small pilot hole through frame. Once completed, drill out hole size using larger & larger drill bits until hole is at $\frac{1}{2}$ " in diameter.



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

Install the 5/8 bolts in each frame bracket as well as ½" bolts in rear hole of each frame bracket. Note that top 5/8" bolt **(see Figure 2)** may need to be installed



into bracket before placing bracket onto truck. On some applications, the bolt head on this bolt may need to be slightly ground down on one side to fit into bracket & frame hole.

NOTE:

It is recommended to also install Engineered Vintage Shackle Brackets if installing BBWM to reinforce frame.

- 5) Washers should be installed on frame side. If installing BBWM without Engineered Vintage Shackle brackets, install bolts so that washers, lock washers and nuts are on outside of frame and install washers against frame.
- Install winch mount with four ¹/₂" bolts to frame brackets it is recommended to install winch mount as shown in picture (bottom of winch plate against frame brackets)
 - a. It is not recommended to use the $\frac{1}{4}$ " spacers between frame bracket & winch plate in the high mount configuration
 - b. It is possible (if winch clearance allows) to install one or both spacers inside winch plate to act as reinforcement (similar to washers) in this configuration.

7) Once winch plate is installed to frame brackets, and outer bumper support brackets are installed, all bolts can be tightened. Make sure that all eight frame bracket bolts are tightened, as well as the four winch plate to frame bracket bolts: **12 total bolts**

Torque 1/2-inch bolts to 80 LB. FT Torque 5/8-inch bolts to 100 LB. FT

 Once winch mount kit bolts are tight, 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 tight. Once bumper is ensured to be installed correctly, it is time to mark the bumper for cutting.

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.

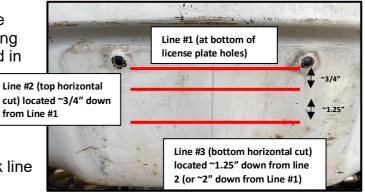
 Take a long pencil and holding it along winch plate, mark the back of the bumper – on a stock truck this line should be approximately at the bottom of the bumper license plate holes. Once this mark is made, measure





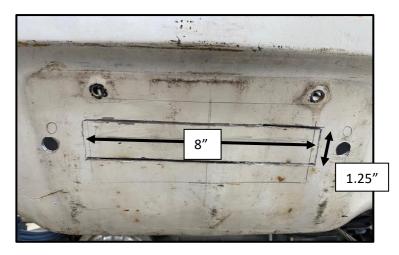
down $\frac{3}{4}$ " of an inch – and make a second line on back of bumper below the first line. This second lower line corresponds to the opening in the winch mount plate. Measure the distance between bottom of the license plate holes and this second line – it should be close to $\frac{3}{4}$ "

- 10)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.
- 11)Mark line #1 (just under the license plate holes) and then measure down ³/₄" to mark line



#2 on the bumper. Measure down 1.25" from line #2 to mark line #3

- a. Line #2 is top horizontal cut for winch cable
- b. Line #3 is bottom horizontal cut for winch cable
- 12)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
- 13)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



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

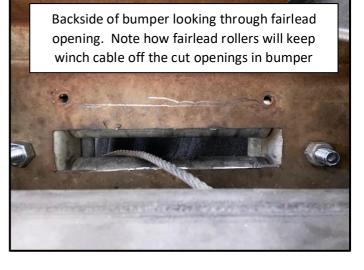
CAUTION

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

- 15)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 ½" bolts depending upon the particular winch or fairlead being used)
- 16)Install Fairlead onto bumper with fairlead hardware

▲ WARNING

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



- 17)Mount the winch up into BBWM as well as the fairlead and feed cable through winch plate, bumper, and fairlead.
- 18) Reinstall stock outer bumper braces

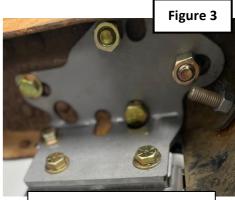
- 19)Double check that all bolts are tightened and torqued install of high mount configuration is complete Torque 1/2-inch bolts to 80 LB. FT Torque 5/8-inch bolts to 100 LB. FT
- **NOTICE** If your state requires your vehicle to have a front license plate, there are many options available online for mounting a license plate to roller fairlead or under/above roller fairlead. Check out your favorite online retailer for options.

Completed installation of BBWM in high-mount configuration shown below



1969-72 Low Mount configuration install

- Remove front bumper from truck. Requires removal of (6) ¹/₂" bumper bolts. ³/₄" socket/wrench required. Set bumper hardware aside
- 2) Remove outer bumper braces from frame of truck
- Place frame bracket onto frame and check for interference – frame bracket should rest tight against frame side.
 - a. For low mount configuration, install five bolts (three 5/8" bolts & two 1/2" bolts)



Driver side frame bracket in low mount configuration

b. If you are mounting this onto a 1967-68 truck, a 2wd truck or a 4wd truck without factory tow hook holes, installation of this kit may require drilling. To drill frame,

follow frame drilling instructions outlined in High Mount configuration install (page 4, step #4)

Bolts should be installed as shown in Figure 3, with washers on both sides of all $\frac{1}{2}$ " bolts. Bolts should not be tightened down yet – washers should be installed on outside of frame.

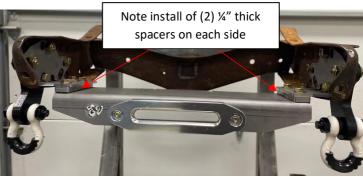
NOTE:

It is recommended for additional strength and frame reinforcement to install Engineered Vintage Shackle bracket tow hooks with BBWM.

Note that bottom 5/8" bolt may need to be installed into bracket before placing bracket onto truck. On some applications, bolt head may need to be slightly ground down on one side to fit into bracket.

- 4) Repeat for opposite frame bracket
- 5) Install winch mount it is recommended to install winch mount as shown in picture at right with two ¼" spacers on each side added between bottom of frame brackets and bottom of winch plate – this will space winch plate and fairlead down to clear bottom of truck's bumper.
 - a. Use (4) 2" long ½" bolt ("E")
 - b. Use (8) ¹/₂" washers ("H") one under bolt head & one under lock washer
 - c. Use (4) $\frac{1}{2}$ " lock washers ("J")
 - d. Use (4) ¹/₂" nut ("G")
- 6) Tighten & torque all bolts
 - a. Torque 1/2-inch bolts to 80 LB. FT
 - b. Torque 5/8-inch bolts to 100 LB. FT
- 7) Install Fairlead onto winch plate
 - a. Use (2) 2" long ¹/₂" bolt ("E")
 - b. Use (2) ½" nut ("G")
 - c. Use (2) 1" long fairlead spacer tube ("K")
 - i. If fairlead uses different sized hardware obtain correct hardware from hardware store





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

- 8) Mount the winch up into BBWM and feed cable through winch plate, bumper, and fairlead.
- 9) Reinstall stock outer bumper braces
- 10)Double check that all bolts are tightened and torqued – install of low mount configuration is complete.
 - a. Torque 1/2-inch bolts to 80 LB. FT
 - b. Torque 5/8-inch bolts to 100 LB. FT



Install of BBWM in Low Configuration is complete

1967-68 BBWM mounting

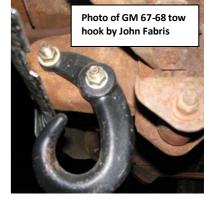
The slight differences in the 1967-68 frame compared to the 1969-72 truck frames make mounting the Engineered Vintage BBWM on these early year trucks a bit more involved.

Either high configuration or low configuration is possible – removal of certain frame rivets as well as drilling of truck frame is required.

NOTICE

If truck has factory 67-68 curved tow hooks or it is desired to someday have factory 67-68 hooks

installed take note that the mount up of this option is not covered in instructions below – please reach out to Engineered Vintage if you mount up a BBWM with these style "curved" hooks – we would love to see it! It looks doable, but modifications of the truck frame and/or the BBWM frame brackets will be needed.



The 67-68 curved hook mounting holes are at a different dimension than 69-72 style mounting holes. The instructions below will only allow fit up of 69-72 style hooks or Engineered Vintage Shackle Bracket tow hooks.

Restated, if instructions below are followed, the drilled frame holes will not be in correct location for the 1967-68 style curved hooks

The installation of the BBWM in these years of trucks is covered below:

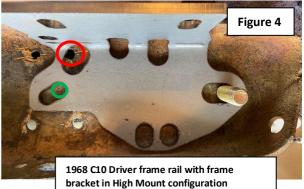
1967-68 High Mount configuration installation

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 OR installing the **BBWM** in Low Mount Configuration to avoid damaging/warping stock bumper with winch cable during heavy side pull.

1. Remove front bumper from truck. Requires removal of (6) $\frac{1}{2}$ " bumper bolts. $\frac{3}{4}$ " socket/wrench required. Set bumper hardware aside

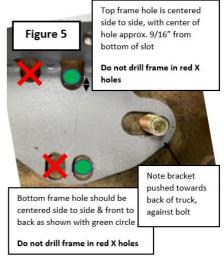


- 2. Remove outer bumper braces from frame of truck if not removed in step 1
- 3. Starting with driver side, insert 5/8 bolt in front slotted frame hole and slide frame bracket towards rear of truck until bolt stops it. Check for interference – there will likely be interference with core support bracket rivet at top right (red circled area in Figure 4.) Remove bracket from truck and remove this rivet. There will be a hole drilled through frame that will reinforce core support mount (green circle in Fig 4) Figure 5

WARNING Λ

Use appropriate PPE (goggles, gloves, hearing protection, etc) when using a grinder, drill, or cutting tool.

- 4. Place frame bracket back onto frame and check that frame bracket is resting tight against frame – insert 5/8 bolt in front slotted frame hole and slide frame bracket towards rear of truck until bolt stops it.
- 5. Mark frame for drilling as shown in Figure 5



Engineered Vintage



- i. Mark the hole locations with a 5/8" diameter drill bit, and then switch to a smaller drill bit and drill pilot hole through frame.
- ii. Drill out holes, stepping up in size with larger & larger drill bits until green marked holes in **Figure 5** are 5/8" diameter.



- i. To drill the rear $\frac{1}{2}$ " hole, refer to Figure 6
 - Take a ¹/₂" drill bit, and place in top right corner of slot (see green circle in Figure 6) Mark the hole center and drill a small pilot hole through frame. Once completed, drill out hole size using larger & larger drill bits until hole is at ¹/₂" in diameter.

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

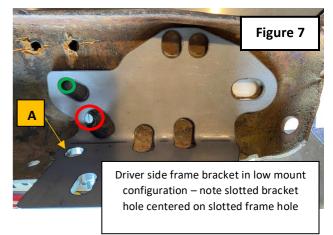
Install the 5/8 bolts in each frame bracket as well as $\frac{1}{2}$ " bolts in rear hole of each frame bracket. Note that top 5/8" bolt **(see Figure 2)** may need to be installed into bracket before placing bracket onto truck. On some applications, bolt head on this bolt may need to be slightly ground down on one side to fit into bracket & frame hole.

Once all holes are drilled and frame brackets are installed, go to Page 5, Step 5 (install of High-Mount configuration on 69-72 truck frame) and follow those instructions to finish install of 1967-68 BBWM in High Mount Configuration.

1967-68 Low Mount configuration installation

- Remove front bumper from truck. Requires removal of (6) ½" bumper bolts. ¾" socket/ wrench required. Set bumper hardware aside
- 2. Remove outer bumper braces from frame of truck

Place frame bracket onto frame and check for interference – frame bracket should rest tight against frame side.



Engineered Vintage

remove this rivet from truck. There will be a new hole drilled through frame that will reinforce core support mount (green circle in Fig 7)

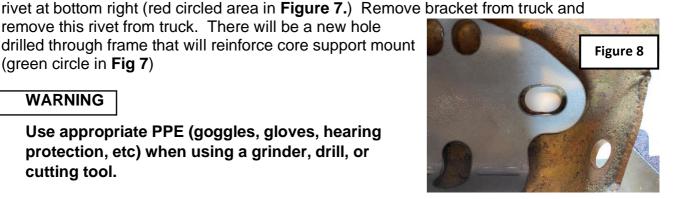
3. Check for interference – there will likely be interference with core support bracket

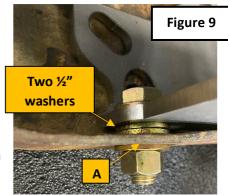
WARNING Λ

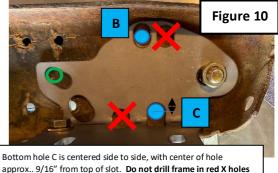
Use appropriate PPE (goggles, gloves, hearing protection, etc) when using a grinder, drill, or cutting tool.

- 4. Once rivet is removed, line up bracket with frame as shown in Figure 8. Install a 5/8 bolt with nut in slotted hole shown in Figure 8. Install a $\frac{1}{2}$ " bolt with (2) washers between bottom of bracket and inside of frame as shown in Figure 9 in hole marked "A." Then tighten both this $\frac{1}{2}$ " bolt and $\frac{5}{8}$ " bolt to prevent bracket from moving – double check that bracket is still in correct location as shown in Figure 8.
- 5. Once these two bolts are tight, mark frame for drilling. Green circle shown in Figure 10 is a $\frac{1}{2}$ " diameter hole that should be located centered in top corner of slot as shown in pic. Blue circles shown in Figure 10 are 5/8" diameter holes that should be located as follows:
 - a. Hole B Hole should be centered side to side in slot and centered top to bottom in slot
 - b. Hole C Hole should be centered side to side. Center of hole should be ~9/16" down from top of slot as shown in Fig 10.
- 6. Mark the hole locations with a 1/2" diameter bit (green hole) & a 5/8" diameter drill bit (blue holes), and then switch to a smaller drill bit and drill pilot holes through frame.
 - a. Drill out holes, stepping up in size with larger & larger drill bits until (Figure 10) green hole is at $\frac{1}{2}$ " and blue marked holes are 5/8" diameter.
- 7. Install driver side frame bracket and install (5) bolts: Three 5/8" bolts & two $\frac{1}{2}$ " bolts.

Bolts should be installed with the ends of bolts pointed towards outside of truck and with washers against truck frame. Bolts should not be tightened down yet.







Page | 13

NOTE:

It is recommended for additional strength and frame reinforcement to install Engineered Vintage Shackle bracket tow hooks with installation of the Behind Bumper Winch Mount (BBWM)

Note that bottom 5/8" bolt may need to be installed into bracket before placing bracket onto truck. On some applications, bolt head may need to be slightly ground down on one side to fit into bracket.

- Repeat installation on passenger side of truck using opposite side frame bracket – modifying truck frame following steps #3-7 above.
- Once 67-68 frame has been modified and both frame brackets are installed, go to Page 9, step 5 to finish install of this option.



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 $10^{\circ} \times 4.5^{\circ}$ 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 67-72 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.



1972 K20 shown with BBWM in top mount configuration (winch cable through bumper) Also shown with Shackle Bracket Tow hooks (sold separately)



1972 K20 shown with BBWM in low mount configuration (winch cable under bumper)

Winches that are compatible with the 67-72 BBWM:

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

Thank you and check out our other products at:

Engineered Vintage.com

Engineered Vintage