X022
version #05152026

Mercedes Benz Sprinter 3500

(2007 to present chassis years)

General Tools Required:

- Cordless Impact Driver
- Cordless Drill
- 9/16” Drill Bit
- White Paint
- Ratchet Wrench
- 1/2” Socket (with extension)
- 5/8” Socket
- 11/16” Deep Socket
- 9/16” Deep Socket
- 3/4” Deep Socket
- 10mm Wrench
- 15mm Wrench
- 1/2” Wrench
- 9/16” Wrench
- 5/8” Wrench
- 11/16” Wrench
- 3/4” Wrench
- T-25 Torx Bit (3” long or use extension)
- 5/16” Socket Bit
- Small Phillips Screw Driver
- Flat Head Screw Driver

Bigfoot Hydraulic Systems – Lippert plant 175
305 US-131 South, White Pigeon, MI 49099
800-752-9815 - bigfootleveler.com

This manual provides general instructions. Many variables can change the circumstances of the instructions, i.e., the degree of difficulty, operation and ability of the individual performing the instructions. This manual cannot begin to plot out instructions for every possibility, but provides the general instructions, as necessary, for effectively interfacing with the device, product or system. Failure to correctly follow the provided instructions may result in death, serious personal injury, severe product and/or property damage, including voiding of the Bigfoot warranty.

• Failure to follow instructions provided in this manual may result in death, serious personal injury and/or severe product and property damage, including voiding of the component warranty.

• During servicing make sure that the coach is supported according to the manufacturer's recommendation. Lift the coach by the frame and never the axle or suspension. Do not go under the coach unless it is properly supported. Unsupported coaches can fall causing death or personal injury or product or property damage. Use proper personal protective equipment.

• Always wear eye protection when performing service, maintenance or installation procedures. Other safety equipment to consider would be hearing protection, gloves and possibly a full face shield, depending on the nature of the task.

• Moving parts can pinch, crush, or cut. Keep clear and use caution

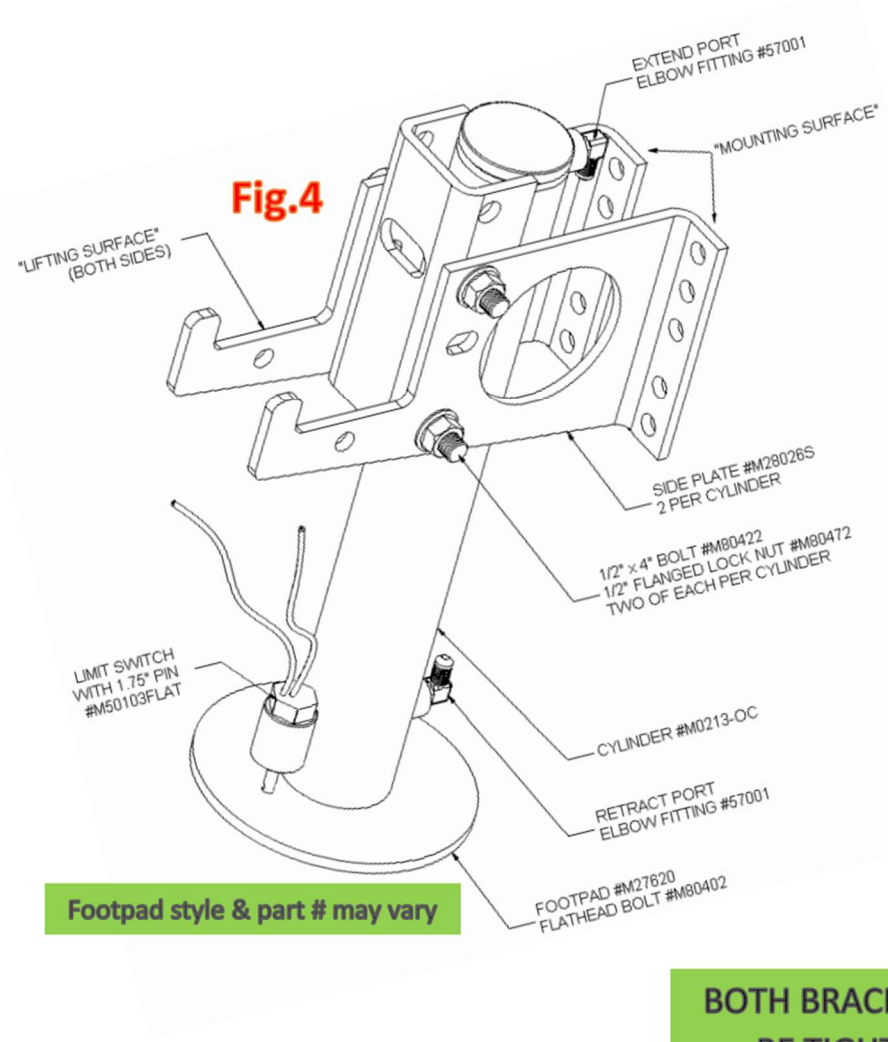
2024 and newer chassis: Passenger front cylinder – page 1 of 2

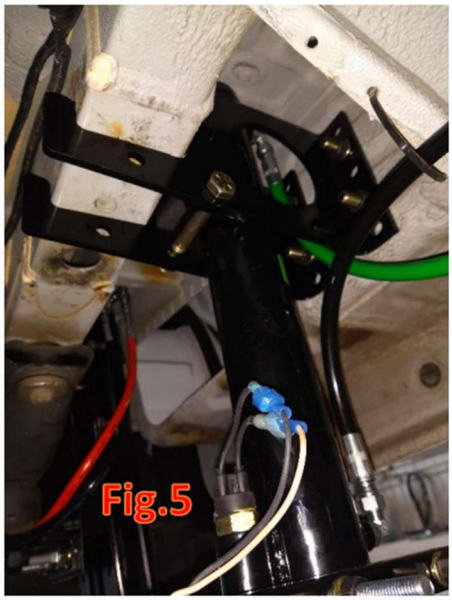
Starting with passenger side: Remove side step cover in cab, there are two torx screws on top (use T-25 torx bit) see Fig.1; and three at step floor under tapered caps, see Fig.2 for a close up of the tapered caps, use a flathead screw driver/knife to remove them by pulling outward (away from vehicle) and up, they will slide out.

Assemble cylinder as shown on Fig.4, hardware tight enough to keep in place without brackets sliding around. Place cylinder assembly to the vehicle frame as shown in Fig.5/6/7A. Not location of jack assembly in relation to vehicle frame, the mounting holes in the brackets to be located in the area of Fig.8 for reference. Ensure the bottom of the vehicle frame is tight to the lifting surface of the brackets as shown. The cylinder assembly can be held up by a floor jack to keep in place, also additional torque can be applied to ensure tight fit to bottom of frame. Excess vehicle undercoating may need removed for brackets to fit. Once the cylinder assembly is in place, mark the vehicle drilling surface with a marker or elbow drill in the mounting holes as shown, always four holes, two per bracket, typically 2nd hold from the top and 2nd hole from the bottom. Once holes are marked, remove cylinder assembly and drill holes with 9/16" drill bit. Paint drilled holes prior to re-installing jack. Place cylinder assembly back in place and insert 7/16" hardware, with 1.5" bolts & flatwashers on the outside and lockwashers and nuts on the inside.

Re-install step cover and tapered plugs with original torx screws.

2024 and newer chassis: Passenger front cylinder – page 2 of 2





BOTH BRACKET LIFTING SURFACES MUST BE TIGHT TO BOTTOM OF FRAME!

Fig.7A

2024 and newer chassis: Driver front cylinder – page 1 of 2

2024+ Sprinter Front Driver Side Cylinder Mounting

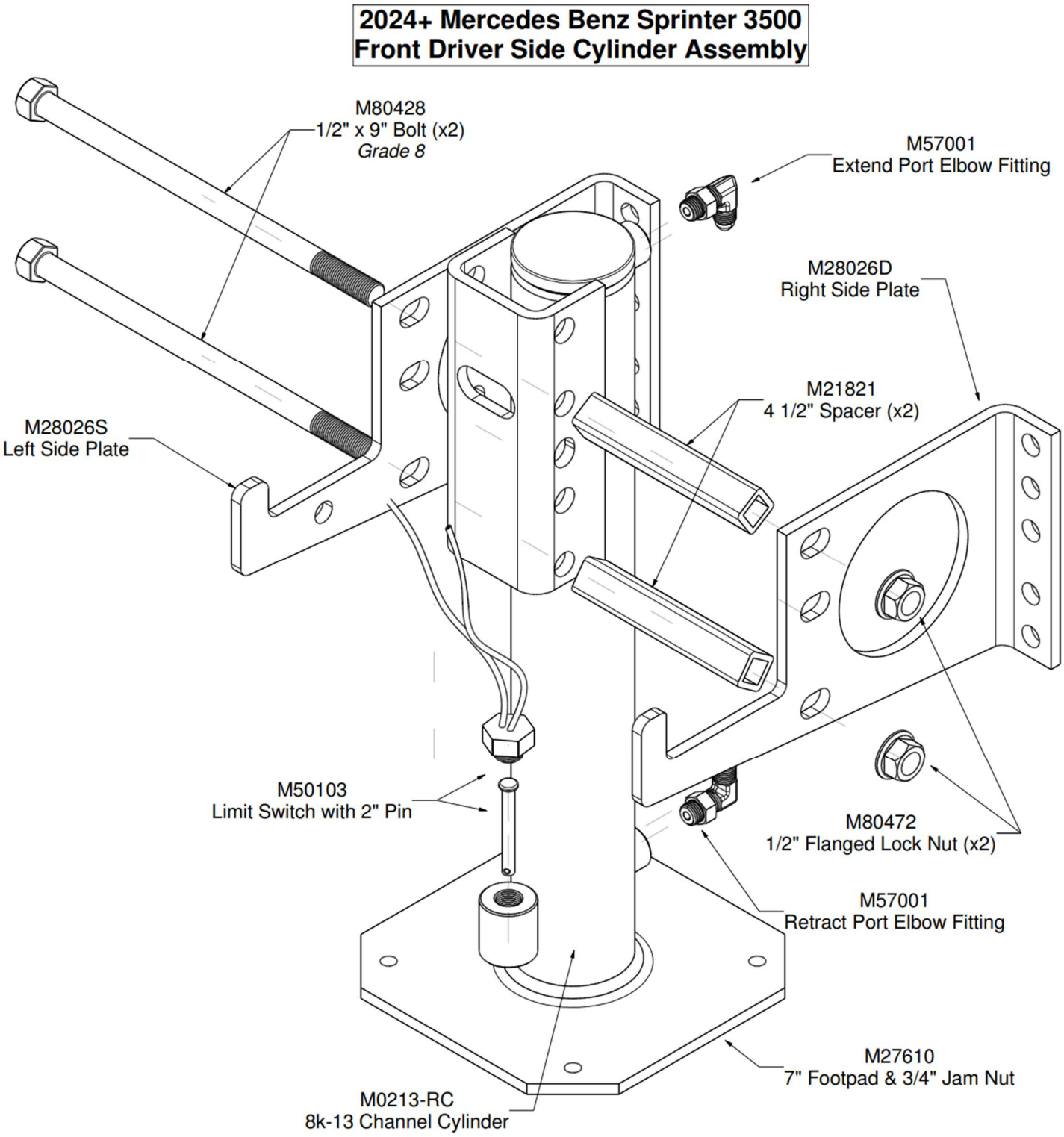
For Sprinter chassis years 2024 and up, the driver side installation process is nearly identical to that of the Sprinter 2019-2023 year chassis, only differing in the assembly of the jack and the drill template used.

Due to the placement of a canister on the frame(highlighted in red in image below), the driver side jack uses a wider setup than used on the previous years chassis.

Pre-assemble driver side jack as shown on the included diagram.

Follow the 2019-2023 chassis mounting instructions

2024 and newer chassis: Driver front cylinder – page 2 of 2



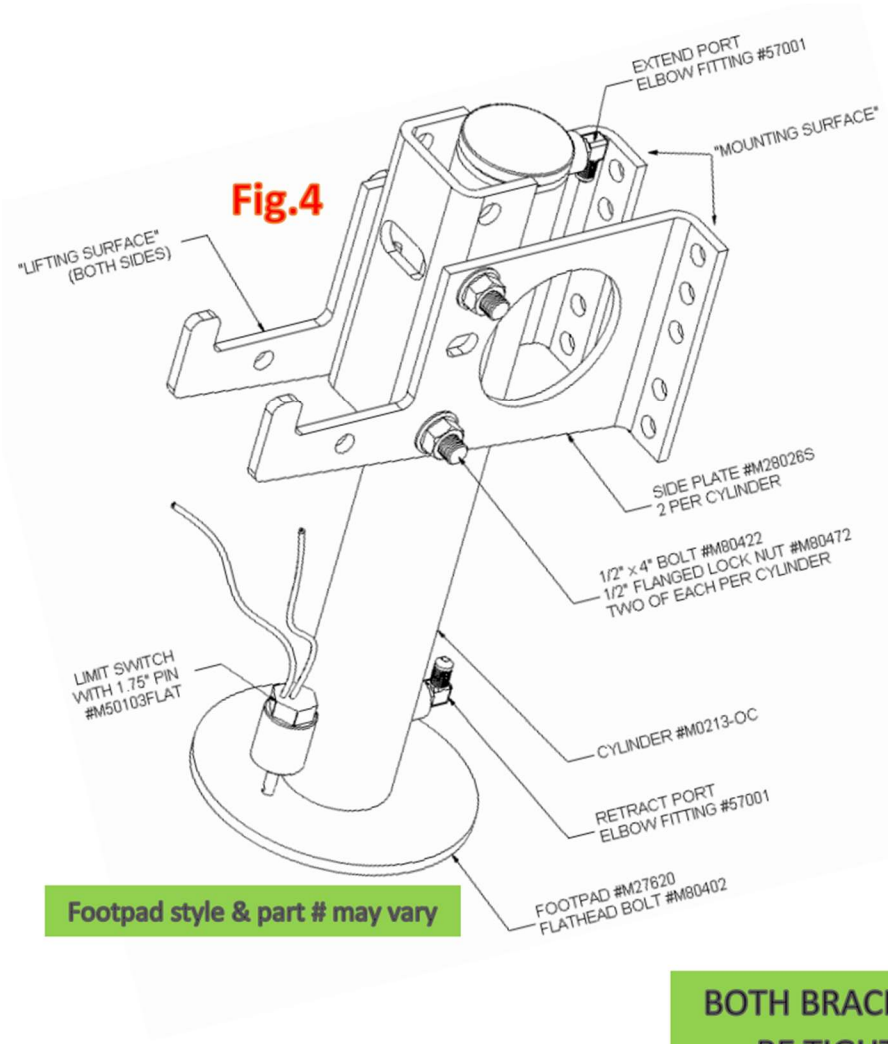
2019-2023 chassis: Passenger and Driver front cylinder – page 1 of 2

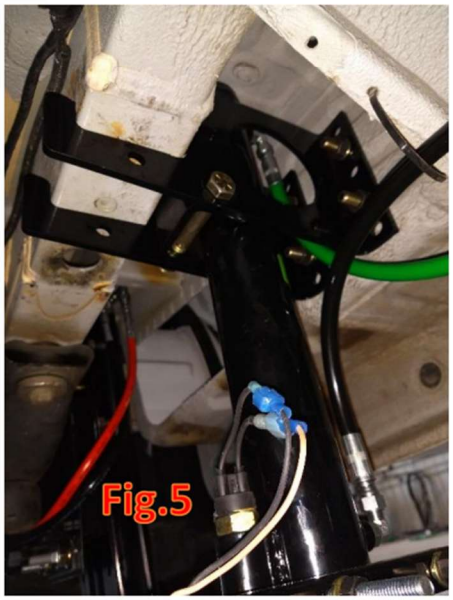
Starting with passenger side: Remove side step cover in cab, there are two torx screws on top (use T-25 torx bit) see Fig.1; and three at step floor under tapered caps, see Fig.2 for a close up of the tapered caps, use a flathead screw driver/knife to remove them by pulling outward (away from vehicle) and up, they will slide out.

Assemble cylinder as shown on Fig.4, hardware tight enough to keep in place without brackets sliding around. Place cylinder assembly to the vehicle frame as shown in Fig.5/6/7A. Note location of jack assembly in relation to vehicle frame, the mounting holes in the brackets to be located in the area of Fig.8 for reference. Ensure the bottom of the vehicle frame is tight to the lifting surface of the brackets as shown. The cylinder assembly can be held up by a floor jack to keep in place, also additional torque can be applied to ensure tight fit to bottom of frame. Excess vehicle undercoating may need removed for brackets to fit. Once the cylinder assembly is in place, mark the vehicle drilling surface with a marker or elbow drill in the mounting holes as shown, always four holes, two per bracket, typically 2nd hold from the top and 2nd hole from the bottom. Once holes are marked, remove cylinder assembly and drill holes with 9/16" drill bit. Paint drilled holes prior to re-installing jack. Place cylinder assembly back in place and insert 7/16" hardware, with 1.5" bolts & flatwashers on the outside and lockwashers and nuts on the inside. Tighten all ½" and 7/16" hardware once cylinder is as straight and level as possible.

Re-install step cover and tapered plugs with original torx screws.

2019-2023 chassis: Passenger and Driver front cylinder – page 1 of 2





BOTH BRACKET LIFTING SURFACES MUST BE TIGHT TO BOTTOM OF FRAME!

Fig.7A

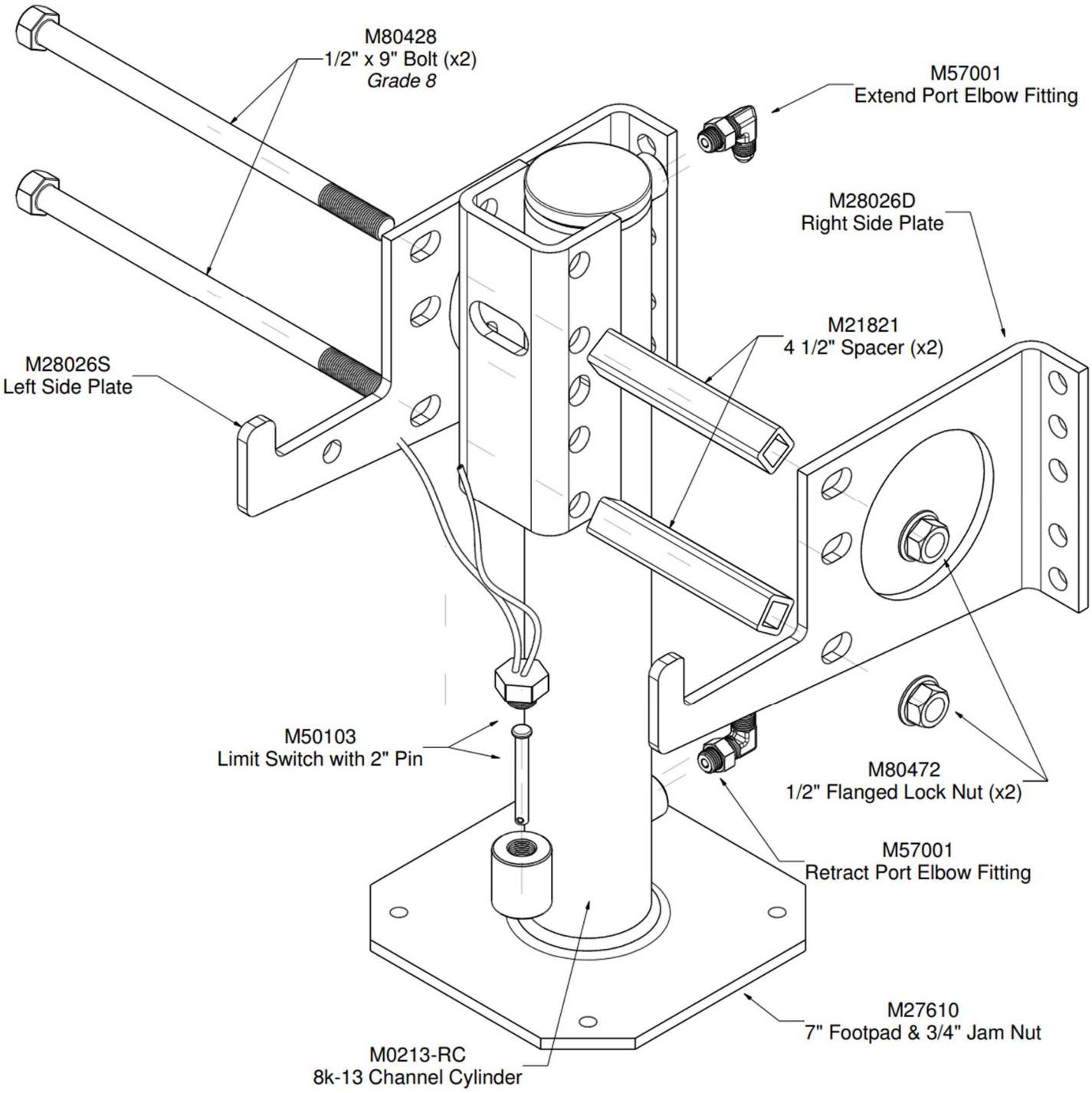
2007-2018 chassis: Driver front cylinder – page 1 of 3

Remove side step cover in cab, there are two torx screws on top (use T-25 torx bit) see Fig.1; and three at step floor under tapered caps, see Fig.2 for a close up of the tapered caps, use a flathead screw driver/knife to remove them by pulling outward (away from vehicle) and up, they will slide out.

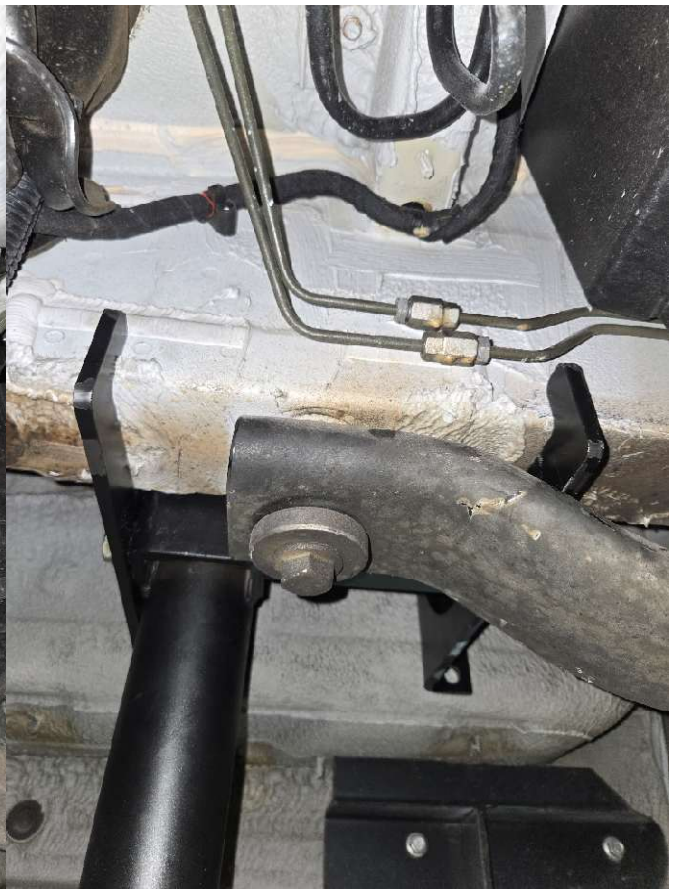
Assemble cylinder as shown on the next page, hardware tight enough to keep in place without brackets sliding around. Place cylinder assembly to the vehicle frame as shown on the next page. Note location of jack assembly in relation to vehicle frame and transmission support brace. The cylinder brackets will straddle where the transmission support attaches to the vehicle frame, one bracket in front and one after. The mounting holes in the brackets to be located in the area shown with the bolts and exposed step area for reference. Ensure the bottom of the vehicle frame is tight to the lifting surface of the brackets as shown. The cylinder assembly can be held up by a floor jack to keep in place, also additional torque can be applied to ensure tight fit to bottom of frame. Excess vehicle undercoating may need removed for brackets to fit. Once the cylinder assembly is in place, mark the vehicle drilling surface with a marker or elbow drill in the mounting holes as shown, always four holes, two per bracket, typically 2nd hold from the top and 2nd hole from the bottom. Once holes are marked, remove cylinder assembly and drill holes with 9/16" drill bit. Paint drilled holes prior to re-installing jack. Place cylinder assembly back in place and insert 7/16" hardware, with 1.5" bolts & flatwashers on the outside and lockwashers and nuts on the inside. Tighten all ½" and 7/16" hardware once cylinder is as straight and level as possible.

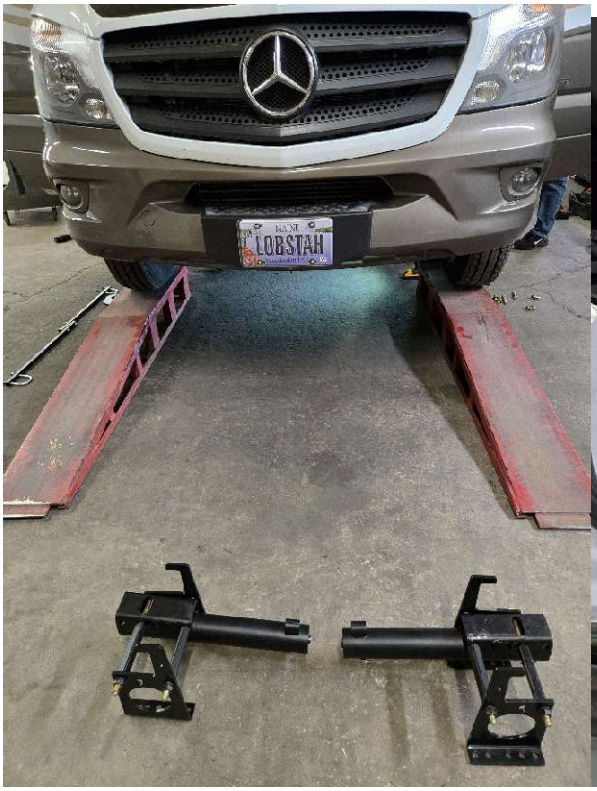
Re-install step cover and tapered plugs with original torx screws.

2007-2018 chassis: Driver front cylinder – page 2 of 3



2007-2018 chassis: Driver front cylinder – page 3 of 3





2007-2018 chassis: Passenger front cylinder – page 1 of 1

Reference the driver side, this side is just mirrored from the driver side. Ensure the spacers are the opposite side of the cylinder compared to the driver side.

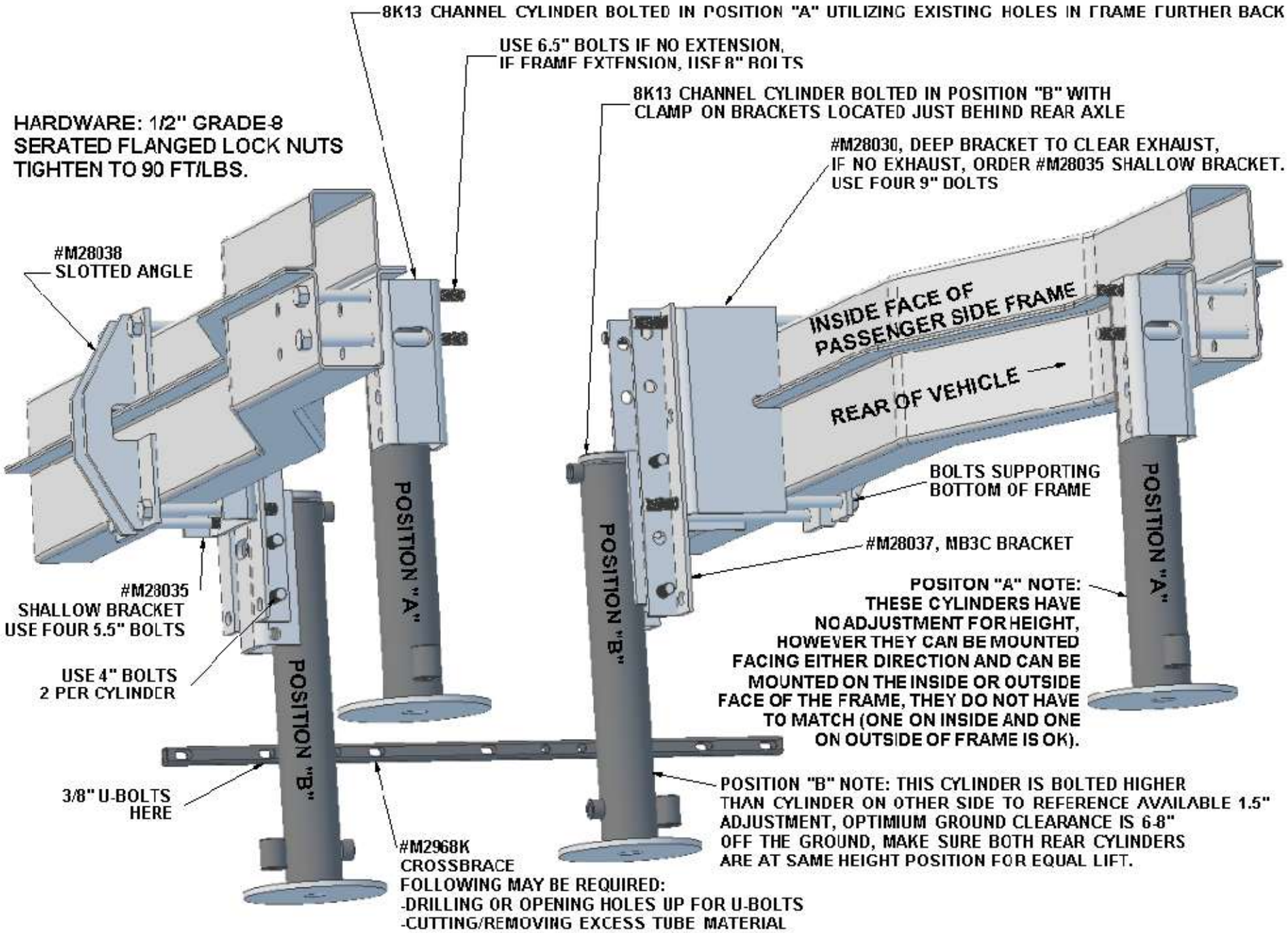
2007 and present cutaway chassis: Rear Cylinder Mounting – page 1 of 4

The standard rear cylinder locations are mounted directly to rear frame rails, referenced on the next page as “position A”. Located at the rear of the Mercedes frame just past the rear leaf spring shackle mounts, at the location of the vehicle frame extension if there is one. They utilize existing holes in the frame that the vehicle hitch receiver or the RV manfacturer’s frame extension fastens to.

Un-bolt the two bolts shown, insert the rear cylinder either on the inside or outside of the frame rail, and install the supplied longer bolts. The bolts and sleeves inside the frame may be a tight fit and require pressing or forcing the bolts through. The cylinder can be installed on the inside or outside of the frame, the can both be inside, both be outside, or staggered with one on the inside and one mounted to the outside. Typically cylinder ports facing forward.

The second rear option is referred to as “position B” on the next page, the brackets clamp around the vehicle frame and the jacks are located further forward and closer together towards the rear axle (behind axle). Note the orientation of the brackets to properly clear the exhaust, this setup is not as preferred as the location above due to the cylinders being closer together, this results in occasional cylinder footpad not making contact with the ground post leveling due to the close distance between the controller has a hardtime sensing ground contact with the rigid Mercedes frame. Adjust the height of the cylinders so the footpads to the ground are between 7-8” off the ground ideally.

Pre-install the elbow fittings, maybe slightly rotate them as shown in Fig.11 for each side for increased clearance from bolts.


8K13 CHANNEL CYLINDER BOLTED IN POSITION "A" UTILIZING EXISTING HOLES IN FRAME FURTHER BACK
USE 6.5" BOLTS IF NO EXTENSION,
IF FRAME EXTENSION, USE 8" BOLTS
8K13 CHANNEL CYLINDER BOLTED IN POSITION "B" WITH
CLAMP ON BRACKETS LOCATED JUST BEHIND REAR AXLE
HARDWARE: 1/2" GRADE-8
SERATED FLANGED LOCK NUTS
TIGHTEN TO 90 FT/LBS.
#M28030, DEEP BRACKET TO CLEAR EXHAUST,
IF NO EXHAUST, ORDER #M28035 SHALLOW BRACKET.
USE FOUR 9" BOLTS
#M28038
SLOTTED ANGLE
INSIDE FACE OF
PASSENGER SIDE FRAME
REAR OF VEHICLE
POSITION "A"
POSITION "B"
POSITION "A"
BOLTS SUPPORTING
BOTTOM OF FRAME
#M28037, MB3C BRACKET
#M28035
SHALLOW BRACKET
USE FOUR 5.5" BOLTS
USE 4" BOLTS
2 PER CYLINDER
POSITON "A" NOTE:
THESE CYLINDERS HAVE
NO ADJUSTMENT FOR HEIGHT,
HOWEVER THEY CAN BE MOUNTED
FACING EITHER DIRECTION AND CAN BE
MOUNTED ON THE INSIDE OR OUTSIDE
FACE OF THE FRAME, THEY DO NOT HAVE
TO MATCH (ONE ON INSIDE AND ONE
ON OUTSIDE OF FRAME IS OK).
3/8" U-BOLTS
HERE
#M2968K
CROSSBRACE
POSITION "B" NOTE: THIS CYLINDER IS BOLTED HIGHER
THAN CYLINDER ON OTHER SIDE TO REFERENCE AVAILABLE 1.5"
ADJUSTMENT, OPTIMIUM GROUND CLEARANCE IS 6-8"
OFF THE GROUND, MAKE SURE BOTH REAR CYLINDERS
ARE AT SAME HEIGHT POSITION FOR EQUAL LIFT.
FOLLOWING MAY BE REQUIRED:
-DRILLING OR OPENING HOLES UP FOR U-BOLTS
-CUTTING/REMOVING EXCESS TUBE MATERIAL

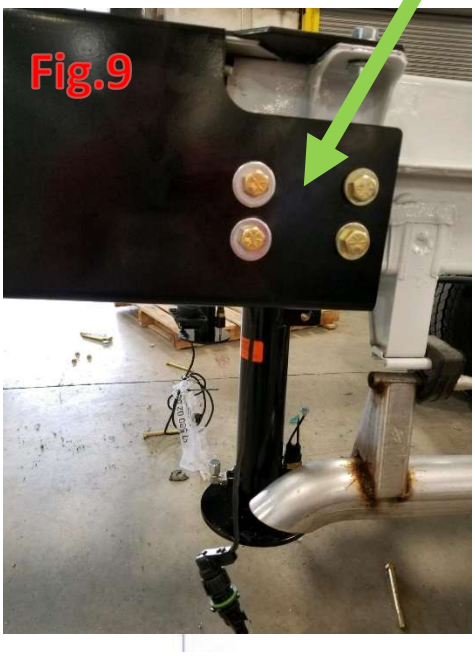
2007 and present cutaway chassis: Rear Cylinder Mounting – page 3 of 4

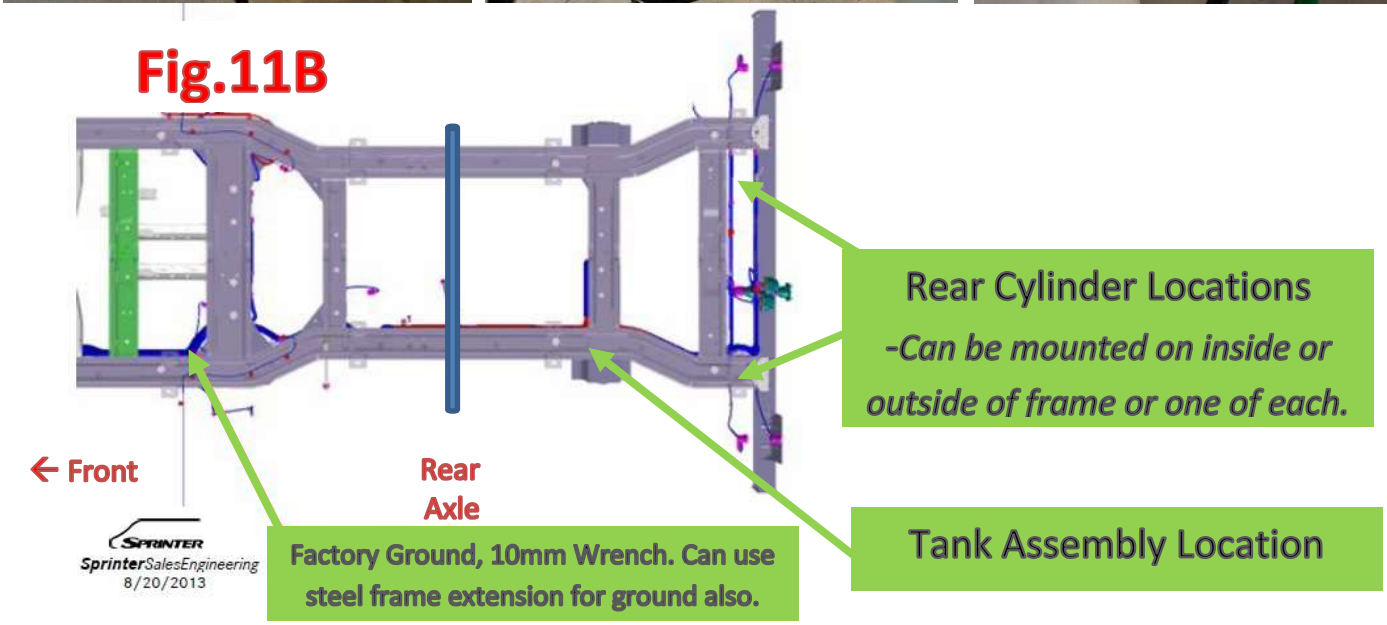
Cylinders utilize the same mounting holes as the frame extension, see Fig.11B. Kit will come with 6.5” and 8” long ½” mounting bolts. The four 8” are used when a coach has a frame extension (fit most models) as shown below, the 6.5” long bolts can be used when there is no frame extension. (Make sure other bolts holding frame extension will clear cylinder fitting, Fig.11). Typically cylinders will be placed on the inside of the vehicle frame (Fig.10). However, if there is room on finished unit, cylinders could be mounted to outside of frame extension or staggered (one inside and one outside) as well.

Make sure cylinders are level or straight, then tighten ½” bolts to 80 ft/lbs. using ¾” socket and wrench.

Rear cylinders can be mounted on the outside of the frame extension as well

Fig.10, make sure extend fitting clears bolt, may need shorter bolt or add washers for additional clearance.





2007 and present cutaway chassis: Rear Cylinder Mounting – page 4 of 4

See the diagram on page 9 for locations and visual confirmation on how this system attaches to the vehicle's frame. This is a bolt-on system and requires no drilling or welding.

Cylinder Preparation

Install the Elbow fittings on the lower & top ports of the jacks. Take care not to overtighten and break the fittings, just needs to squeeze the o-ring. You can always check the fittings for fluid or final tightening during bleeding process later on. The foot pads can be installed now or after the jacks are installed. Must use an impact, do not turn counter-clockwise. Use the ¾" jam nut OR Allen hex flat head bolt (threadlocker required for bolt) to attach depending on footpad style.

Location

The center of the brackets & jacks should be roughly 15" from center of rear axle, just between the sway bar link bracket and a body mount.

Driver Side

First place the M28038 brackets and M28035 bracket on driver's side frame rail in the location listed above. To hold the two brackets up place two 5 ½" bolts & ½" lock nuts (head side to outside of rail) thru the holes as shown in the diagram. Then place the M28037 brackets (both are the same) on the bolts and have the locknuts ready to keep the assembly from falling. Now place the bottom bolts and nuts thru holes, prior to tightening, make sure bottom bolts tight to frame. Insert cylinder with ½" x 4" long bolts two per cylinder, see different height positions for mounting, you want between 6-8" of ground clearance when finished, both cylinders to be at the same height. Tighten bolts to brackets when they are straight and level.

Passenger Side

Use the M28030 bracket & longer 9" bolts & ½" lock nuts due to the exhaust on this side. Follow the same instructions as the driver side. If you don't have exhaust in this area and want a wider stance, call and order another M28035 bracket and 5 ½" bolts.

Crossbrace

Attach using the supplied U-Bolts, 3/8" nuts & lock washers, make sure it is level prior to tightening. Modification may be required to clear parts, like drilling additional holes for U-bolts or cutting excess tube.

NOTE: Installations may require modifications…

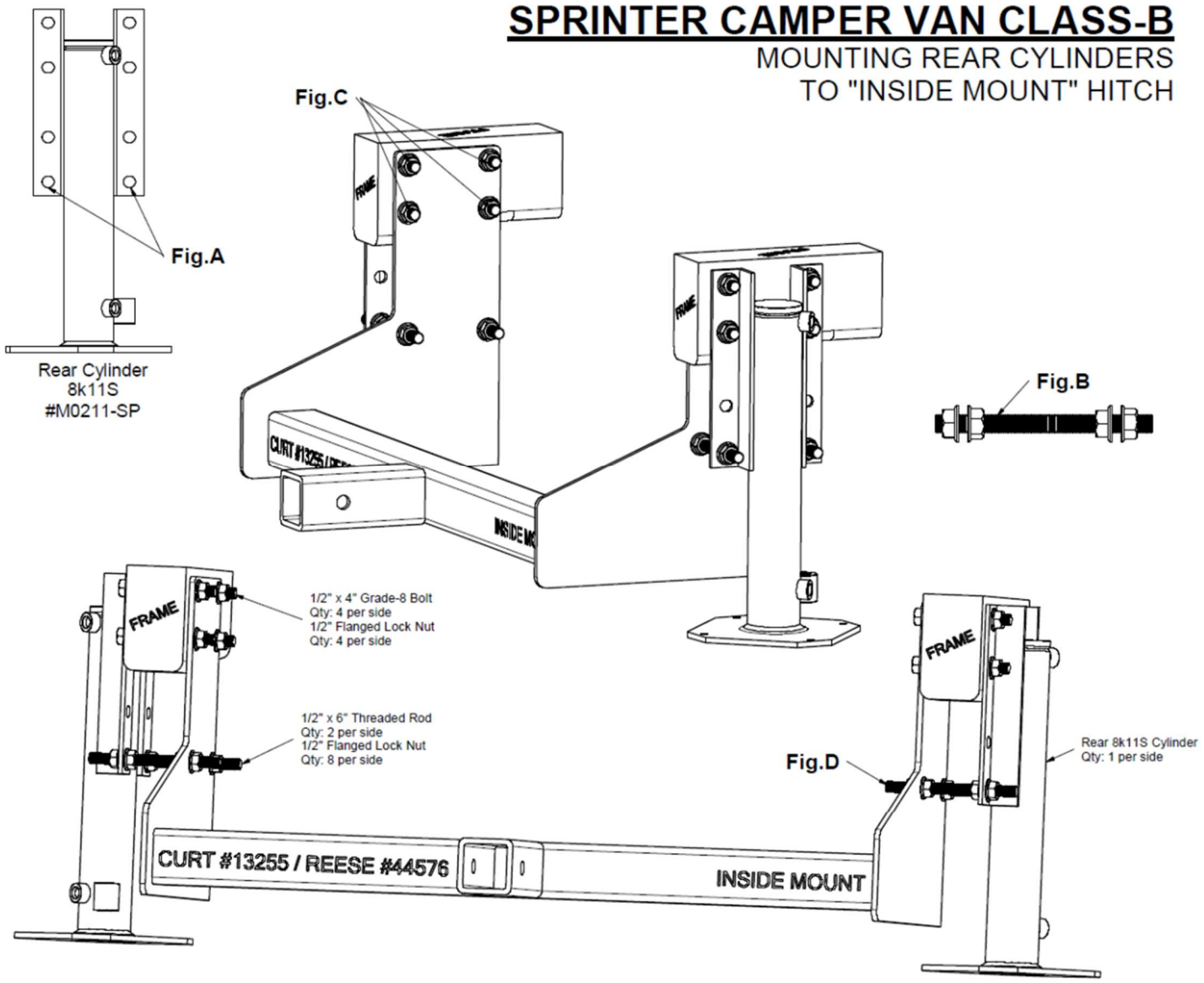
Certain vehicles & RV models may require modifications to the following: Weld-on brackets, Extending limit switch wires & battery cables, Re-routing vehicle exhaust and RV plumbing or wiring, Modification to sub-floor brackets or joists, Storage boxes & Floors. Make sure the proper hardware is used in the proper locations. Everything should be attached and level prior to tightening to following torque specs:

1/2" = Torqued to 80 ft/lbs. 7/16" = Torqued to 70 ft/lbs. 3/8" = Torqued to 45 ft/lbs.

3/4" (Nuts for Foot Pads) = Impact must be used and one to two threads should be visible past nut.

Allen head foot bolts require thread locker prior to installing, do not go counter clockwise

2007 and present van or class-B chassis: Rear Cylinder Mounting – page 1 of 2

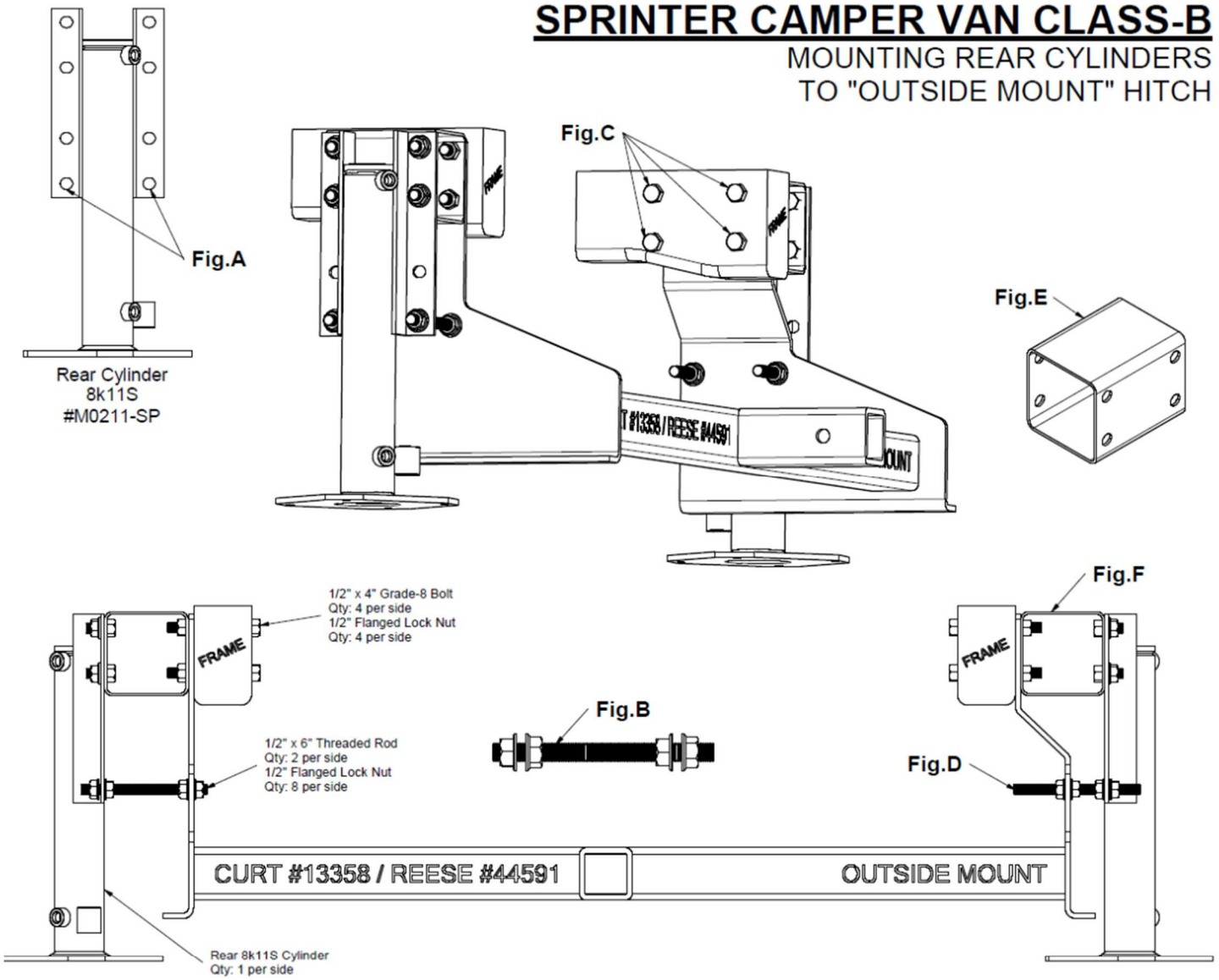


Typical Sprinter Van's have two basic hitch options: 1. "Inside Mount" which refers to the mounting plates bolting in-between the frame rails on the inside surface. 2. "Outside Mount" which refers to the mounting plates mounting on the outside surface of the frame rails.

For the inside mount hitch setup, start by removing the four mounting bolts on one side of the hitch (Fig.C). Remove the hitch's backing plate (if equipped) from the outside surface of the frame rail (opposite hitch mounting plate). Place cylinder in location and insert the supplied 1/2" x 4" long Grade-8 Bolts and Flanged Lock Nuts "sandwiching" the frame with the hitch mounting plate and the hydraulic cylinder. Make sure the cylinder is level and straight prior to tightening each bolt to 120 ft/lbs. Repeat for the other side.

Now that each cylinder is bolted to the frame on each side, it is time to fasten the cylinders to the hitch for side load capacity. Locate the two bottom un-used holes in the cylinder's brackets (Fig.A). Make two marks on the outside surface of the hitch mounting plate even with these two holes for each cylinder. Drill a 1/2" clearance hole (17/32" recommended drill size) at each mark (four total, two per side). Now place the supplied threaded rod as shown in Fig.D with the supplied Flanged Lock Nuts oriented in the manner shown in Fig.B. Tighten all four rods (four nuts per rod) to 70 ft/lbs.

2007 and present van or class-B chassis: Rear Cylinder Mounting – page 2 of 2



Typical Sprinter Van's have two basic hitch options: 1. "Inside Mount" which refers to the mounting plates bolting in-between the frame rails on the inside surface. 2. "Outside Mount" which refers to the mounting plates mounting on the outside surface of the frame rails.

For the outside mount hitch setup, start by removing the four mounting bolts on one side of the hitch (Fig.C). Remove the hitch's backing plate (if equipped) from the outside surface of the frame rail (opposite hitch mounting plate). Place the Spacer Block (Fig.E) in location and insert the supplied 1/2" x 4" long Grade-8 Bolts and Flanged Lock Nuts "sandwiching" the frame with the hitch mounting plate and the Spacer Block (shown in Fig.F), tighten to 70 ft/lbs. Now place the Hydraulic Cylinder and line the holes up with the Spacer Block and fasten to the Block with supplied 1/2" x 1.5" long Grade-8 Bolts and Flanged Lock Nuts (four per side). Make sure the cylinder is level and straight prior to tightening each bolt to 120 ft/lbs. Repeat for the other side.

Now that each cylinder is bolted to the frame on each side, it is time to fasten the cylinders to the hitch for side load capacity. Locate the two bottom un-used holes in the cylinder's brackets (Fig.A). Make two marks on the outside surface of the hitch mounting plate even with these two holes for each cylinder. Drill a 1/2" clearance hole (17/32" recommended drill size) at each mark (four total, two per side). Now place the supplied threaded rod as shown in Fig.D with the supplied Flanged Lock Nuts oriented in the manner shown in Fig.B. Tighten all four rods (four nuts per rod) to 70 ft/lbs.

Vertical Pump Mounting – page 1 of 4

The vertical pump assembly part # M26845 must be mounted in the vertical orientation. This pump assembly can be mounted using the M29313 bracket shown below or mounted directly to the vehicle frame cross-member just behind the rear axle or to any vertical wall or subframe with appropriate clearance. The M29313 tank bracket will come pre-assembled with hardware (Fig.12). Remove the top two 7/16" x 1" bolts and lower 7/16" nuts and set aside. Place the tank mount bracket on top of the frame in location Fig.11BA, Fig.14A & Fig.14 on next page, the tank body side will typically face front of vehicle, but can be oriented any direction.

The bottom two 7/16" bolts will be welded and you can hang the tank assembly to the bracket, the tank can be mounted in 1" increments to desired tank height, shown in pictures mounted flush with top of mount bracket, but can be lowered; Fig.12/13. Tighten two lower bolts with 7/16" nuts & lockwasher, Fig.12/13.

Now re-install each top bolt (Fig.12/13), these bolts will fasten the plate to tank bracket AND tighten bracket against the frame simultaneously, see Fig.12/13/14A.

Attach the two 7/16" x 1.5" bolts, lockwashers, nuts and black square washers (or one-piece plate) thru the front side of the bracket's flange holes, Fig.12. Tighten bolts to "sandwich" to the frame's flange, and remaining hardware.

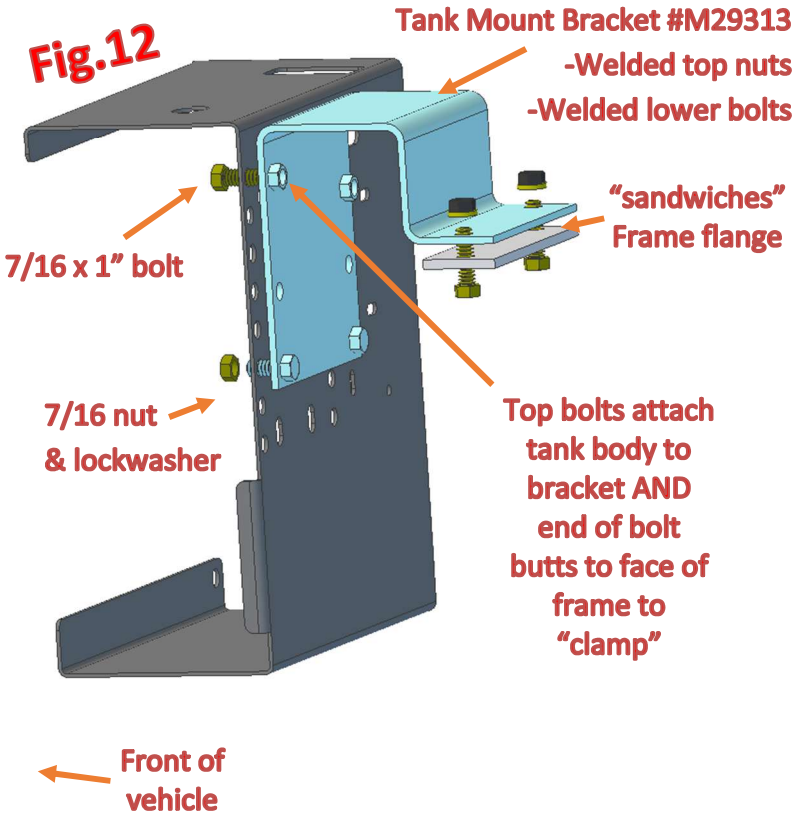
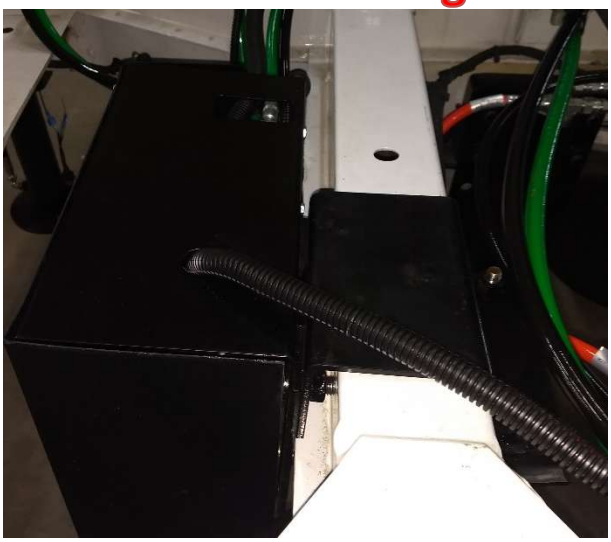
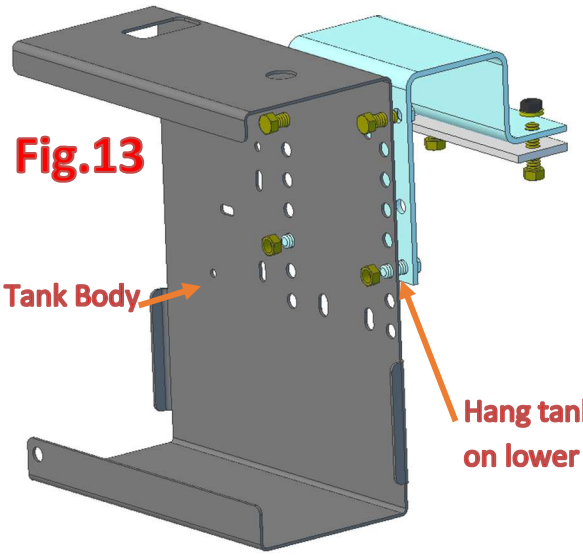
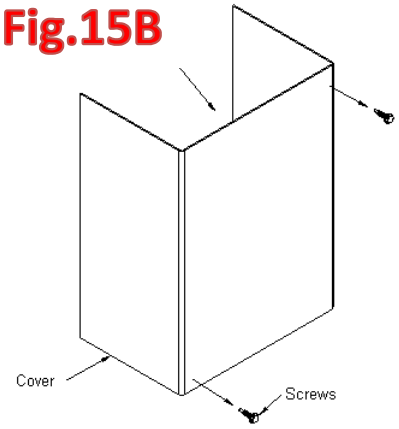
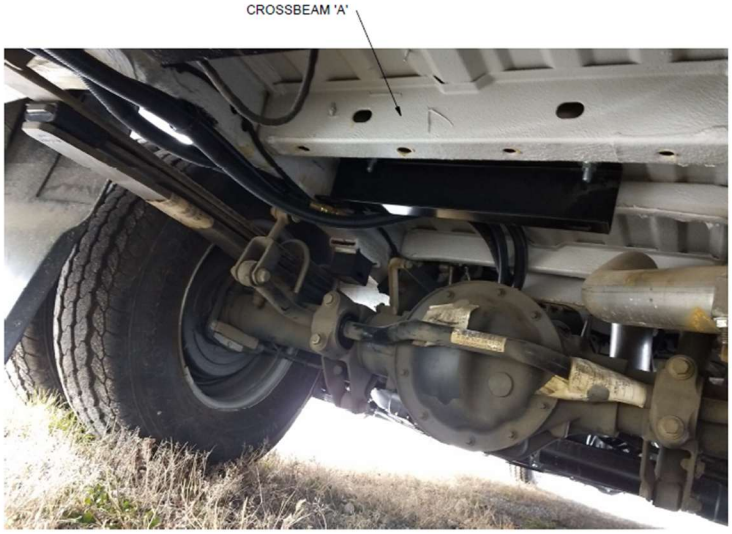


Fig.14A









Locate the crossbeam shown to the left. The tank assembly can be mounted on either the front or rear face of the crossbeam.

Insert the 4" full threaded bolt thru the slotted hole shown in Fig.1 & Fig.2, fasten/tighten lockwasher and nut to backside of tank assembly as shown, keep nut parallel to the crossbeam (shown in Fig.4) as it will fit inside the slot in the crossbeam.

Hang tank assembly onto crossbeam by the 4" bolt through both ends of the slots in the crossbeam (Fig.1). Place square washer on backside of crossbeam and fasten/tighten the accompanied nut and lockwasher to 60 ft/lbs (Fig.3). Run all four supplied 5/16" self-threading screws into the holes shown in Fig.2 to finish mounting the tank assembly to the crossbeam. Alternative to self-threading screws: a second full threaded bolt is supplied to place inside one of the holes if you would like to drill a hole into the crossbeam and secure with the second supplied full threaded bolt, nut and lockwasher, fasten to 60 ft/lbs.

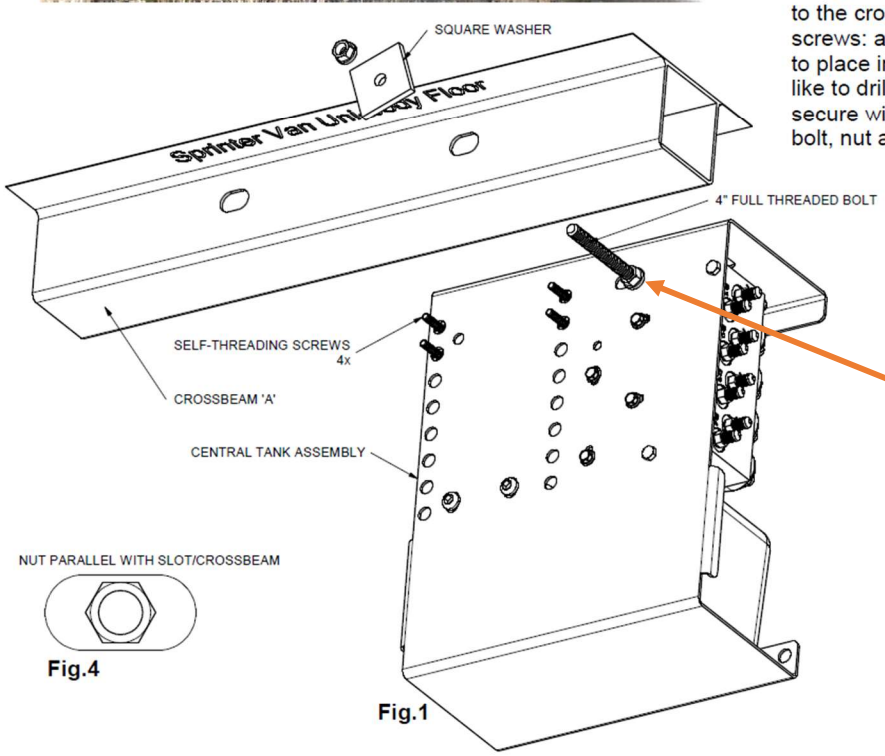


Fig.4

Fig.1

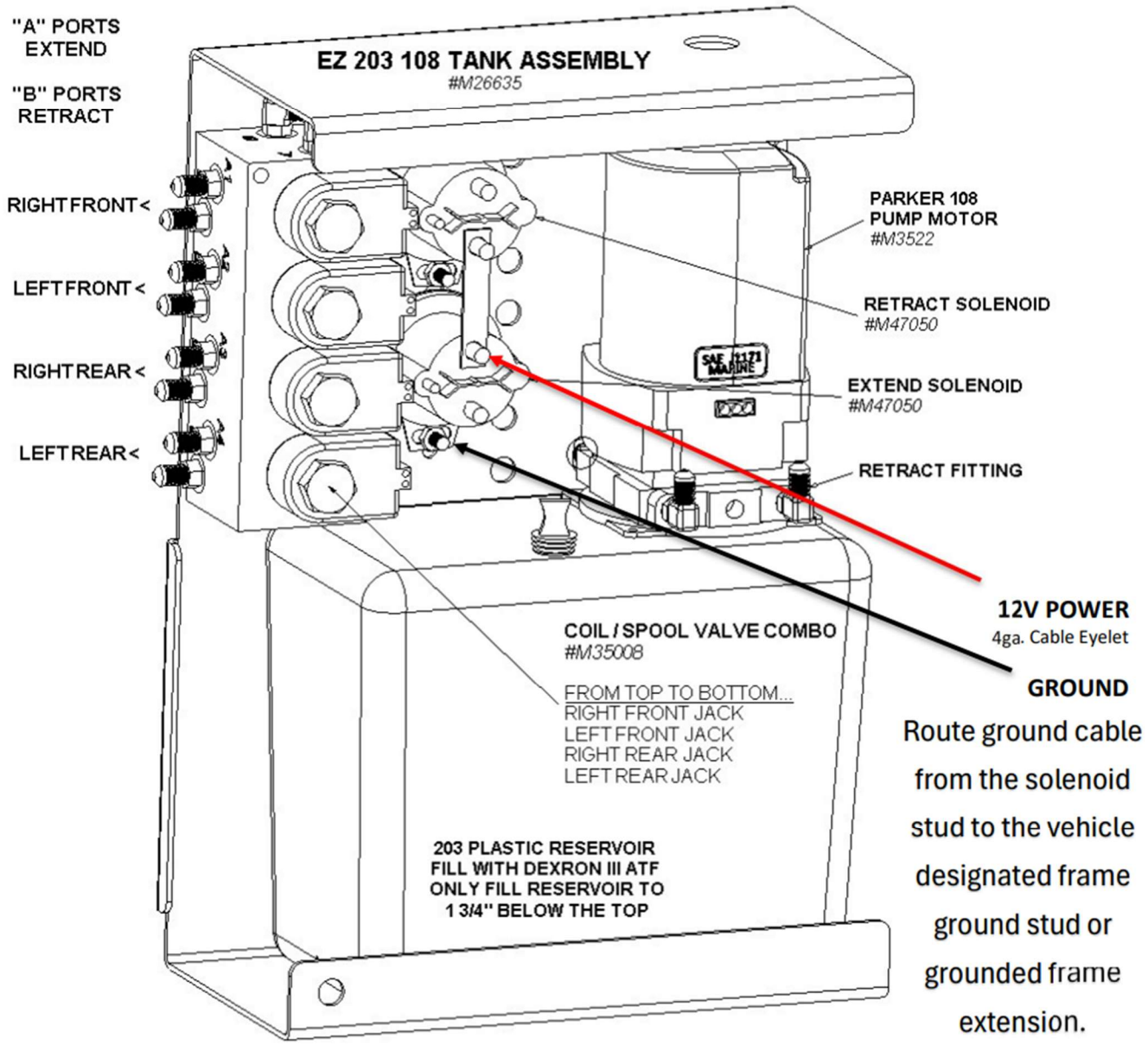
Use one 4” bolt for each slot in the crossbeam “A”, note top holes in tank body to reach each slot.

Vertical Pump Mounting – page 3 of 3

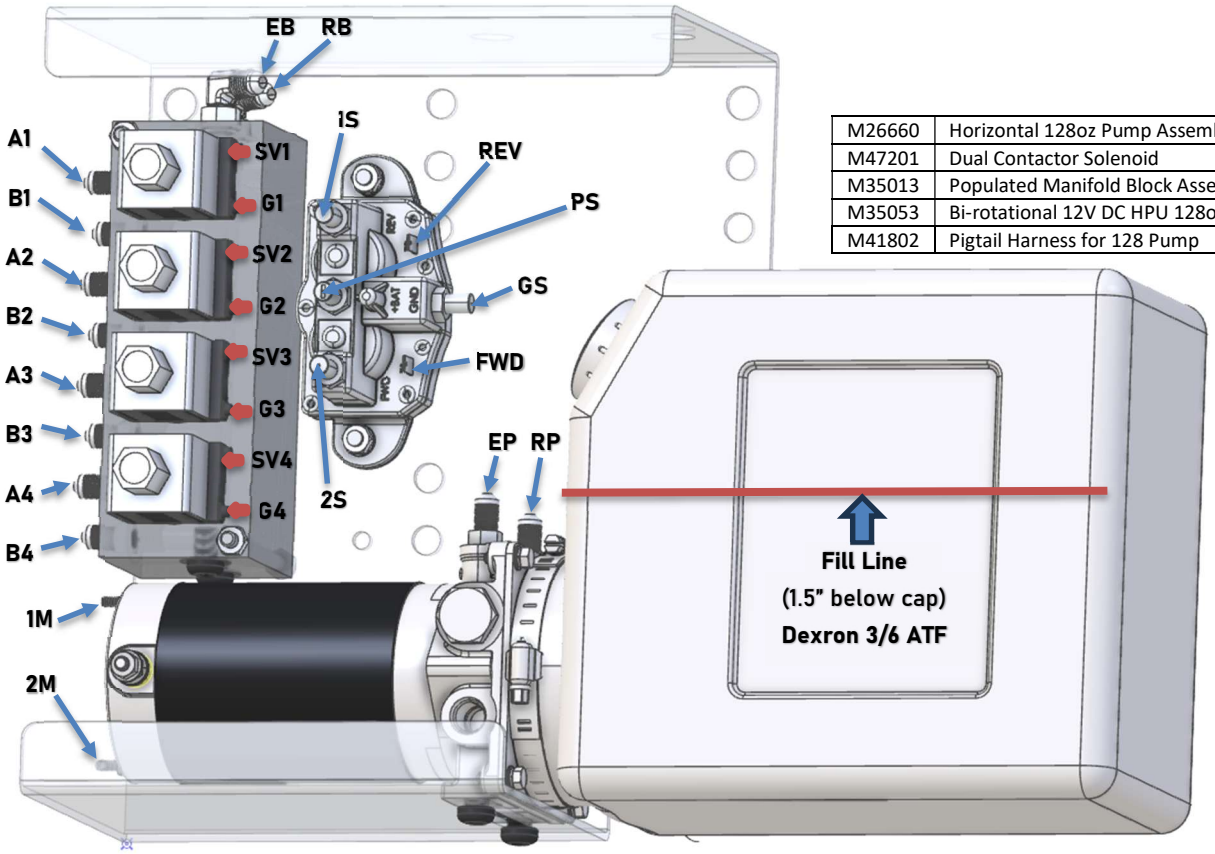
Tank Assembly will be pre-assembled & pre-wired direct from factory.

- Mount the pump using a minimum of two 7/16" bolts, nuts & lock washers.
- Plumbing is shown in Fig. 2 below, use 9/16" wrench and be careful not to under or over-tighten the hydraulic fittings. Sometimes marking the hydraulic lines with tape may make it easier.
- **DO NOT** install the top extend lines to the jacks themselves yet, this will be done later in installation.
- The main wire harness will plug directly into the 14-pin connecter that is pre-wired to the assembly.
- Route the ***ground cable*** (attached to ground shown below) to a grounded surface on the vehicle frame.
- Finally installing the plastic three sided tank cover, this should be done later on in the assembly.
- The tank cover will need to be trimmed to your liking around the hydraulic lines. Fasten the tank cover with at least two self-threading screws, be careful not to puncture the plastic reservoir.

Fig. 2



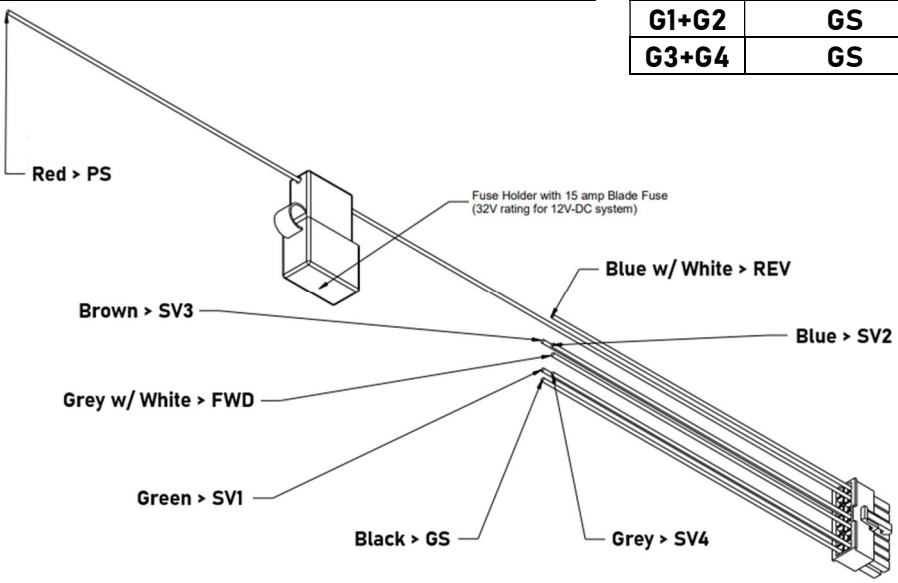
Horizontal Pump Mounting – page 1 of 2



M26660	Horizontal 128oz Pump Assembly
M47201	Dual Contactor Solenoid
M35013	Populated Manifold Block Assembly
M35053	Bi-rotational 12V DC HPU 128oz
M41802	Pigtail Harness for 128 Pump

Factory Pre-wired Connections		
1M	**1S**	M48311 6-AWG Red Cable
2M	**2S**	M48311 6-AWG Red Cable
REV	Female Spade	Blue w/ White wire -M41802
FWD	Female Spade	Grey w/ White wire -M41802
PS	Butt Connector	Red wire -M41802 (+12V)
GS	Butt Connector	Black wire -M41802

Factory Pre-wired & Plumbing Connections		
EB	**EP**	M52353T Green Hose 10.8" OAL
RB	**RP**	M52352T Black Hose 11.5" OAL
SV1	Butt Connector	Green wire -M41802
SV2	Butt Connector	Blue wire -M41802
SV3	Butt Connector	Brown wire -M41802
SV4	Butt Connector	Grey wire -M41802
G1+G2	**GS**	5/16" Ring Terminal (both wires)
G3+G4	**GS**	5/16" Ring Terminal (both wires)

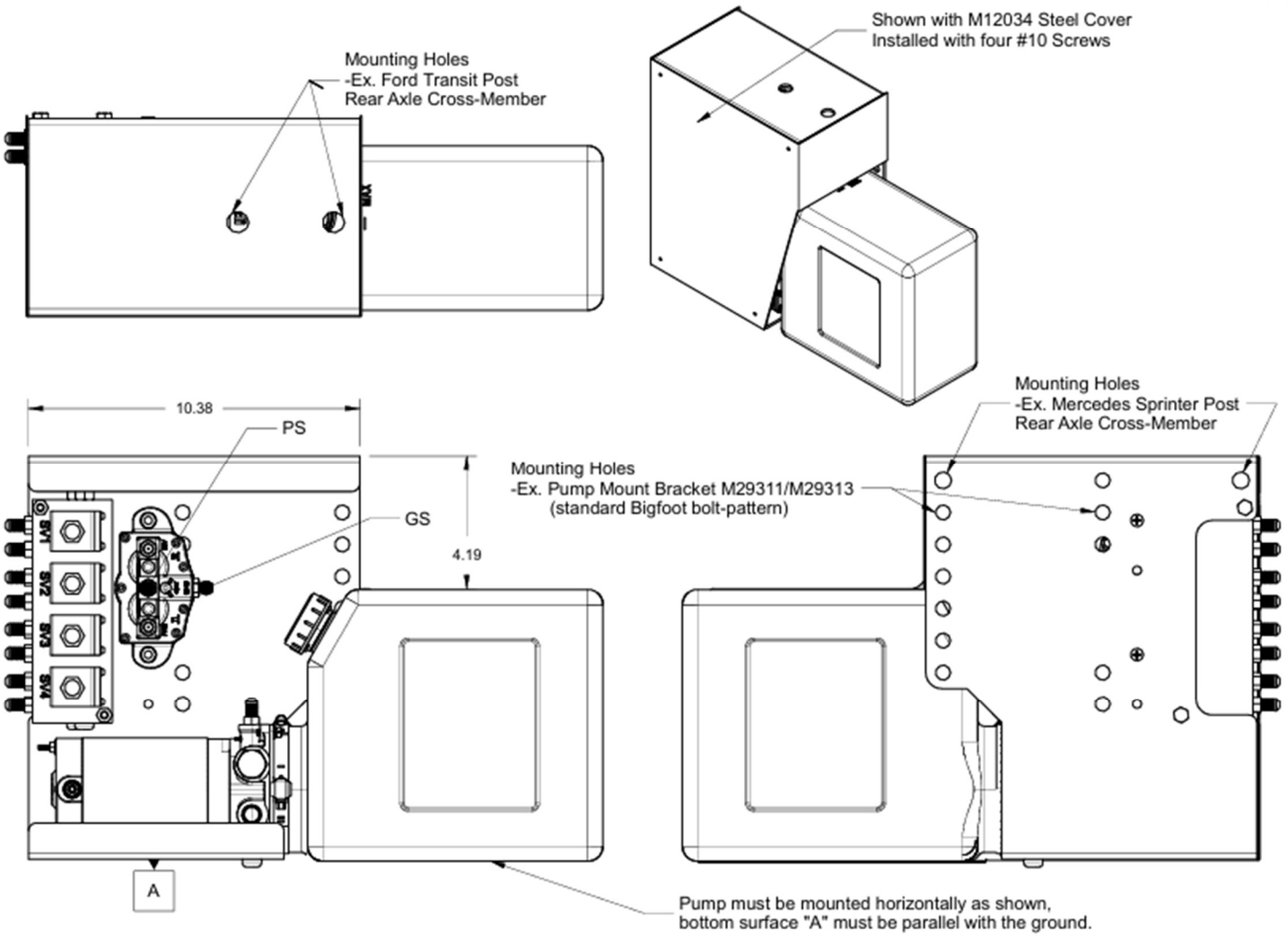


Installation Hydraulic Plumbing	
A1	Pass Front Extend -Green Hose
B1	Pass Front Retract -Black Hose
A2	Driv Front Extend -Green Hose
B2	Driv Front Retract -Black Hose
A3	Pass Rear Extend -Green Hose
B3	Pass Rear Retract -Black Hose
A4	Driv Rear Extend -Green Hose
B4	Driv Rear Retract -Black Hose

Installation Power Connections	
PS	4ga Red Battery Cable AUX stud Breaker
GS	6ga Black Ground Cable Neg. Terminal

Horizontal Pump Mounting – page 1 of 2

Utilize pump mounting holes mentioned below for specific vehicles mounting directly to the vehicle chassis. On the Ford Transit use blind bolts (top surface mount) to underside of the factory rear cross-member just behind the rear axle, utilizing existing holes. On the Mercedes Sprinter, use 1/2” or 7/16” routed through the factory cross-member similar to the vertical pump mounting, but with two bolts. Or utilize the standard Bigfoot bolt-pattern using 7/16” hardware and any standard Bigfoot bracket, or mount directly to vehicle sub-frame, etc. oriented as shown below regarding surface “A”.



Hydraulic Plumbing

Typical hose plumbing for this chassis, lengths required may vary based on application, pump location and hose routing. Some models may require longer hoses due to their floor plans, required hose routing, etc. Recommend purchasing any longer hoses from Bigfoot systems to ensure hoses and fittings are to the specifications of our system. JIC fittings require hand tight + ¼ turn. Do not overtighten as the fittings may break, however check all fittings and ensure they are nice and snug before and after running the hydraulic system. You will need a 7/16" wrench for the fittings, 3/16" allen for the port fittings and 15mm wrench for the hose fittings.

Front Passenger Cylinder Extend Port to Manifold A1 = Green 19 ft

Front Passenger Cylinder Retract Port to Manifold B1 = Black 19 ft

Front Driver Cylinder Extend Port to Manifold A2 = Green 15 ft

Front Driver Cylinder Retract Port to Manifold B2 = Black 15 ft

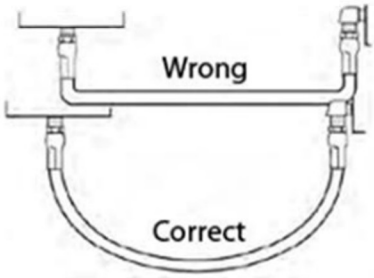
Rear Passenger Cylinder Extend Port to Manifold A3 = Green 4 ft

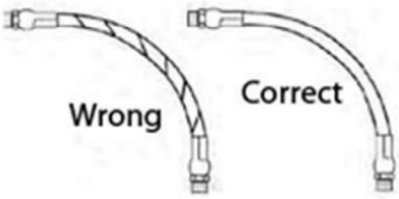
Rear Passenger Cylinder Retract Port to Manifold B3 = Black 4 ft

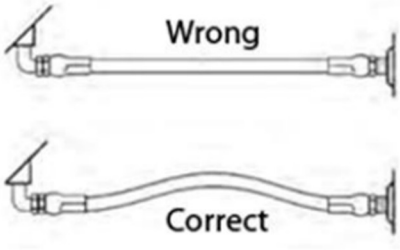
Rear Driver Cylinder Extend Port to Manifold A4 = Green 4 ft

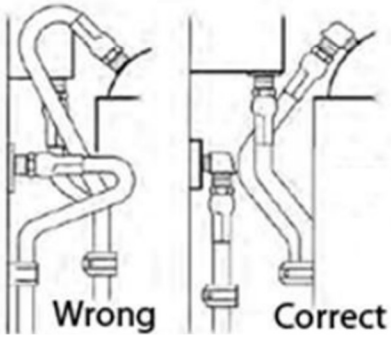
Rear Driver Cylinder Retract Port to Manifold B4 = Black 4 ft

When routing the hose, avoid twisting the hose, keep bends long and sweeping, with slack. Avoid any areas where the bends could kink with tight turns or rub against moving, sharp or hot objects.



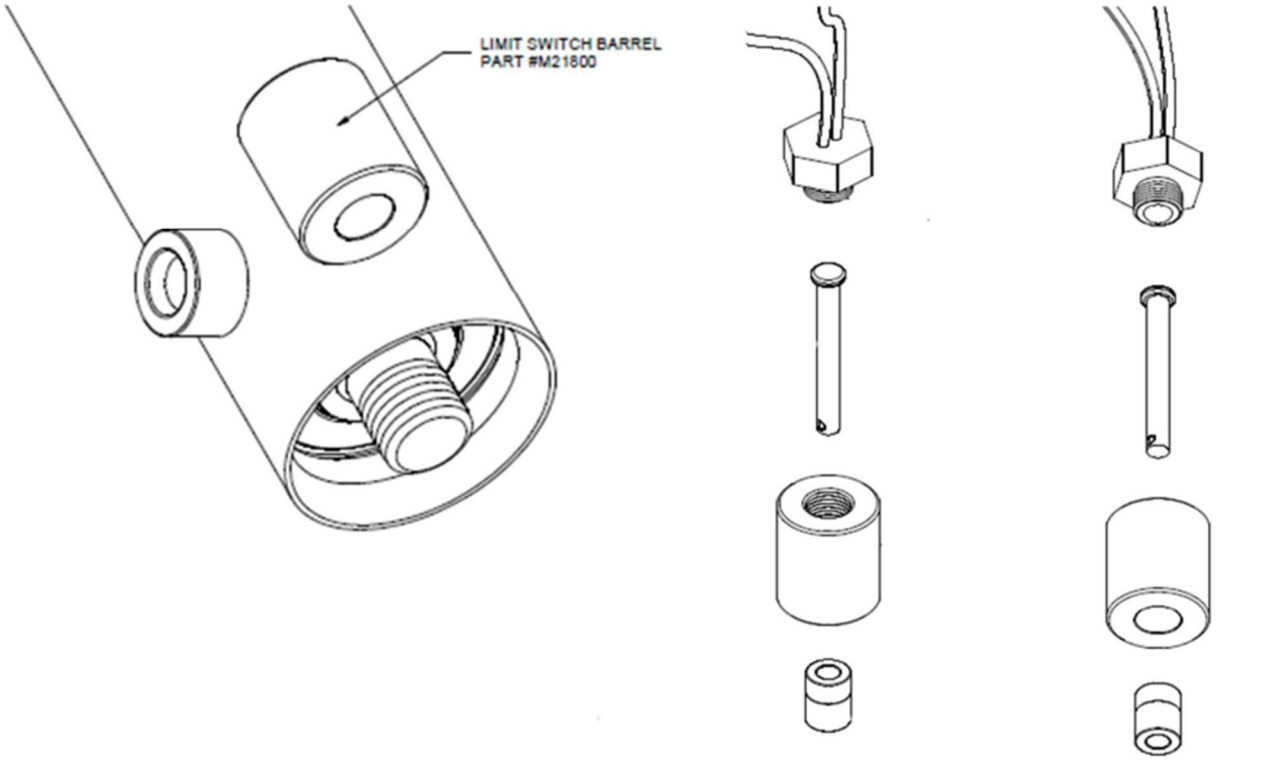






Limit Switches

Each cylinder has a mechanical switch that provides a signal to the controls when the cylinder is not fully stowed or retracted. Locate the limit barrel welded to each cylinder near the footpad as shown below. The barrel already has the white bushing installed from the bottom, need to install pin from the top and thread in the limit switch itself with 7/8” wrench, do not overtighten.

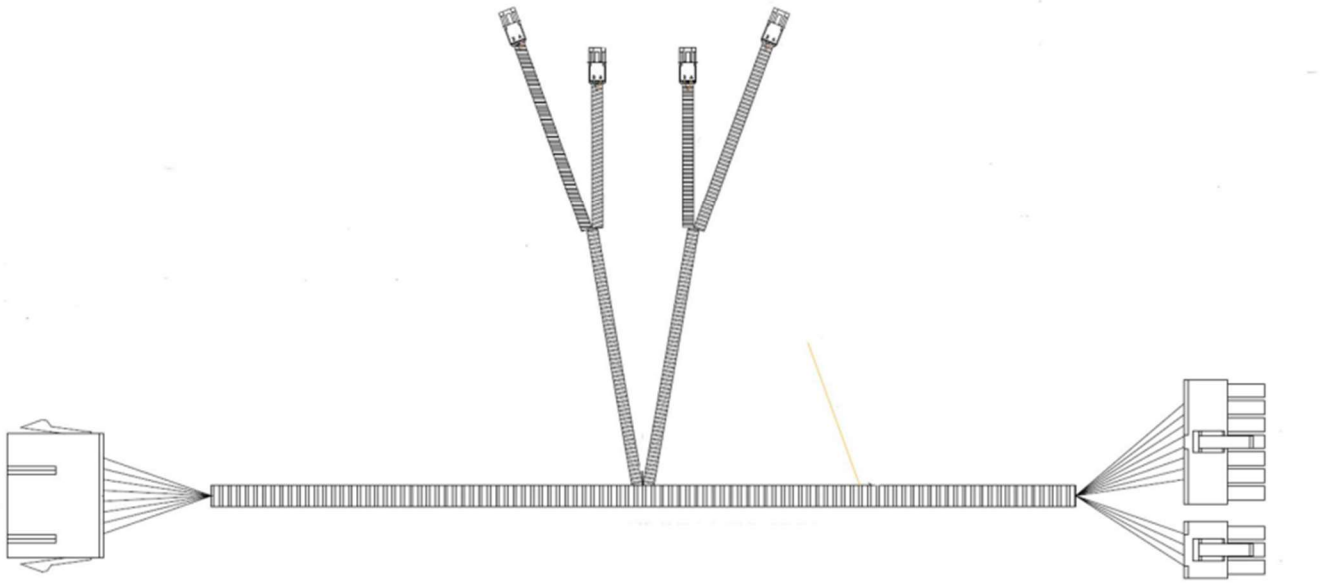


Electronics

Install the controller to a vertical surface, must be directly facing the front, rear, passenger or driver side of the vehicle. Controls cannot be mounted at angles or laying flat. Typical installation is near on or near the cabinetry or dinette near the RV side entry door. Controls may vary, but typically mounted as shown.

Electronics cont'd...

The harness shown below, each black Deutsch connector is routed to a cylinder limit switch, doesn't matter which one. The end with one 14-pin connector is routed and plugged into the pump harness. The end with one 14-pin connector and one 6-pin connector is routed inside the vehicle to the backside of the controller. The yellow wire needs to tie into an ignition or accessory hot wire from the vehicle, see next pages for details.



Battery Cable Installation

Supplied will be a 4 gauge battery cable that needs to be cut into two pieces.

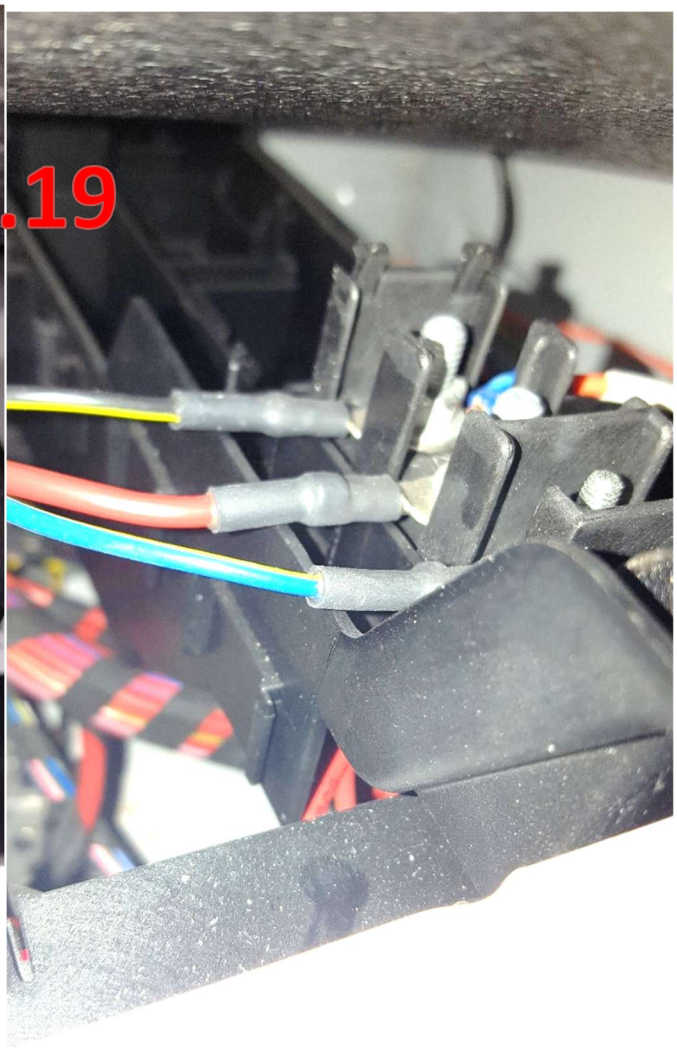
- The 1st to run from the Solenoid power stud from the pump with copper strip to the 80 amp breaker AUX stud.
- The 2nd to run from the BAT stud on the breaker to the Positive Terminal on the RV house battery (not Ford battery). Hooking up the power should be the final wiring step so make sure this is done after all the other electrical work is done for safety. The supplied 80 amp breaker should be securely fastened in the battery box. Ground cable (attached to central pump assembly, typically white 10ga. wire should be fastened to vehicle frame or extended to negative terminal on battery.

Ground cable for horizontal pump assembly is a designated ground cable that is routed directly to the negative terminal of the house battery. Alternative if it will not reach the battery, the ground cable can be fastened to a vehicle frame stud just like the vertical pump ground cable.

Ignition Source - Hooking up yellow wire from 6-pin controller harness

Foam “cover” underneath seat and above seat base, flipped back to expose wiring.

Top surface of driver seat base



Top surface of driver seat base

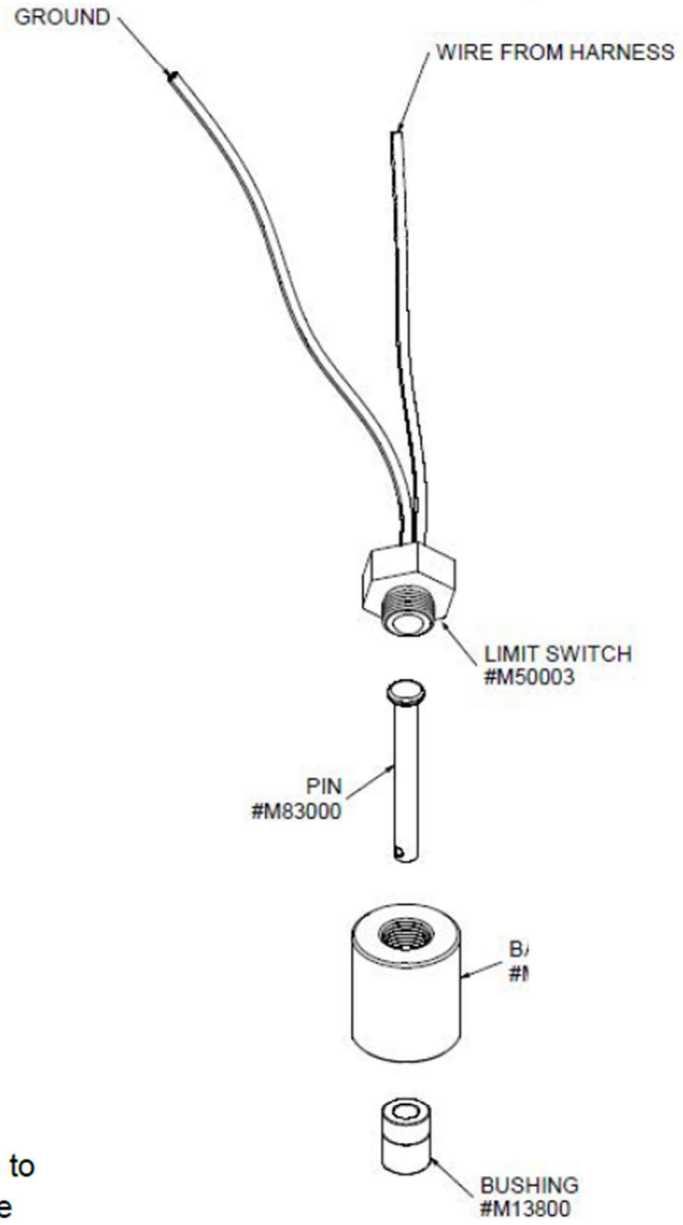
Open driver door, facing the outside face of the driver seat, find the steel seat base the seat bolts to. Look at the top of that seat base and flip back a fabric cover from the seat to expose a foam cover over the top of the steel seat base. Flip back cover to expose the wiring shown above. You are looking for the small black plastic case, which can be oriented front to back (pic#1) and left to right (pic#2). Case has a plastic lid that must be opened and flipped back to expose the three posts. As you can see there is one small post and two larger posts. The ignition hot wire is on the furthest large post from the small post, so in pic#1, it is the black with yellow stripe wire, in pic#2 it is also the black with yellow stripe wire. Manufacturer’s may use different colored wire, determine ignition wire by the specified post mentioned above not by wire color.

SYSTEM MAINTENANCE

For most Bigfoot landing gear and leveling systems…

#1. Check the power supply to the Bigfoot system, RV house batteries, diesel chassis battery, trailer battery, etc. Test the voltage under load by using a volt meter and test your voltage with the system pump operating, if this drops below 10-11 volts, you may need to look into replacing the battery or batteries. If voltage is good under load, you may need to replace or check other connections on the pump assembly, including the power wire (connected to copper strip) and the ground from the pump to the frame. Our pumps ground at the solenoid mounting flange and contact between the pump steel housing and the frame it is bolted to, and has a 10 ga. cable that connects the tank body to the frame, typically only 3-6 ft long.

#2. Inspect and maintain the limit switches (if equipped) for each cylinder. See diagram on the right to identify the limit switch. These can be removed with a 7/8" wrench. To pro-long the life of the switch, remove and apply di-electric grease on the ball itself and the limit pin. These are normally closed switches and are tied to your "Jacks Up" indication, Retract function, and ignition safety alarm on your panel (if equipped).



#3. Check for fluid leaks on the ground, footpad, hose, fittings, etc. Our systems use ATF so the fluid should be red in color. If leak is found, locate the origin and check fluid level inside the pump assembly, fluid level should be between 1-1.5" below the top of the reservoir.

#4. If your cylinder chrome shaft/rod is exposed (not a square jack), spray dry teflon spray on the shaft when leaving for long period of time, more frequently if by the ocean or salty environment.

#5. After a few uses, check all the hardware for cylinder mounting and pump mounting, re-torque to proper specs to make sure the bolts did not come loose. 3/8" & 7/16" hardware to 70 ft/lbs., 1/2" hardware to 100 ft/lbs., if bolt-on system, note any frame or bracket deformation prior to reaching full torque spec. (some deformation is OK, as long as the structure & function of component is still intact).

TROUBLESHOOTING

Most issues are power related. Always check power and ground wire connections first. Check power level of battery under load (place volt meter on battery then press and hold EXTEND ALL on control to see if voltage drops).

Control Panel shuts off during operation

This means the control is receiving less than 9.5v from your house batteries, please check and charge your batteries, then try again.

Cylinders not lifting or holding pressure

This means there is more than likely air in the system (not bleed during installation). Two methods, easy method is to enter manual mode and completely extend all four cylinders to full extension and leave for an hour, then retract, wait another 30 minutes before operating again. If this does not fix the issue then the secondary bleeding procedure must be done, see below for instruction.

Secondary air bleeding process

If there is still air in the system, a more strategic method may be required. Loosen all four extend hose fittings (15mm wrench) on the jacks (located near the top of each cylinder), enough that fluid and air can escape. Enter manual mode on panel Press and hold each cylinder until solid fluid comes out of each fitting. Tighten fittings and repeat for retract hose fittings to ensure all air is out, to retract cylinders in manual mode, press each cylinder and the RETRACT button simultaneously. Re-tighten all fittings and clean up mess. This method can also be done by placing each line in a bucket to minimize mess afterwards. *In some instances, the front jacks may need to be dis-mounted from underneath the cab to access the top extend ports during the bleeding procedure.*

Cylinder will not operate, extend or retract

Attempt to bleed system first, verify that it will not operate in either direction. Then check all wires at the control panel to make sure they are inserted properly and plugged in(wires may be loose in connector). If this is all good, then check wiring at pump(s).

Warranty Guideline

Owner must activate warranty! Via Phone or Website

OEM Installed Quad/Central Pump Systems: 1 year parts and labor

Automatic Leveling Systems: Lifetime Cylinders, 1 year parts and labor

Should the product be defective due to workmanship and/or material flaws, we will repair/replace the defective material.

Core charges may be applied and refunded on certain components.

Bigfoot is NOT responsible for:

- Freight on warranty parts.
- Replacing footpads, bolts, loose or bent brackets or fluids lost as a result of failure to maintain the system, Ex. loose/missing footpads, loose mounting brackets/hardware from not re-torquing after initial use, etc.
- Damages caused by abuse, misuse, negligence, misapplication, error of operation, accidental or purposeful damage or faulty installation, including but not limited to hoses, fittings & wiring components. Example, bent limit switch pins from hitting ground while driving, missing SnapPads, operating system with rear tires off the ground, modification to system, etc.
- Liability for loss to the vehicle, or apparatus or property, loss of time, manufacturing costs, labor, material, loss of profits, consequential damages (direct or indirect).
- For transportation to and from a service center, onsite service calls to or from the customer, damage from road hazard, loss of salaries, commissions, lodging, towing charges, bus fares, car rentals, fuel expense, telephone charges, inconvenience compensation while repairing or replacing a defective part or material.

This warranty voids all previous issues, regardless of provided manual version. Effective date: **7/1/2025**

Owner must register within 30 days from the date of purchase to activate warranty. Call or online at bigfootleveler.com

Prior to any work being done an **authorization number must be obtained** by calling

269-483-9633 for Warranty Parts or Service Labor. For full warranty transcript just contact us!

Service labor based on a flat rate schedule determined by Bigfoot for authorized work performed will be reimbursed. This will eliminate much diagnostic time and avoid refusal of unauthorized claims. Many problems may be resolved by contacting a Bigfoot service representative or visiting our support docs on our website.

Write down your system serial number here_____

Serial # located on the sticker on the system controller or call us, starts with # 8……