



EASY APPROACH[™]
OEM INSTALLATION MANUAL
(FOREST RIVER)

L I P P E R T
C O M P O N E N T S[®]

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Introduction

The lift and lower suspension operation system of the Easy Approach™ Hydraulic Lowering System consists of a 12V DC hydraulic power unit, two hydraulic cylinders, two fluid velocity fuses in the cylinder lift ports — one on each side — and an accumulator. The function of the lift and lower system is to simplify the lifting of the trailer's frame and body to an uppermost position, hydraulically locking the linkage into place so the linkage does not move during transport. The system also lowers the trailer's frame and body to the ground at a controlled rate of speed for ease of loading and unloading.

For information on the assembly or individual components of this product, please visit:

<https://support.lci1.com/forest-river-easy-approach> .

NOTE: Images used in this document are for reference only when assembling, installing and/or operating this product. Actual appearance of provided and/or purchased parts and assemblies may differ.

Safety

WARNING

The "WARNING" symbol above is a sign that an installation procedure has a safety risk involved and may cause death, serious personal injury, severe product or property damage if not performed safely and within the parameters set forth in this manual.

WARNING

The frame and chassis **MUST** be supported per manufacturer's recommendations before working underneath. Failure to do so may result in death, serious personal injury, severe product or property damage.

WARNING

Keep people and pets clear of the chassis/frame when operating the Easy Approach system.

CAUTION

The "CAUTION" symbol above is a sign that a procedure has a safety risk involved and may cause personal injury, product or property damage if not performed safely and within the parameters set forth in this manual.

CAUTION

Make sure to keep hands and other body parts clear of fluid leaks. Leaks in the Easy Approach system may be under high pressure and can cause skin-penetrating injuries.

CAUTION

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

CAUTION

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

Resources Required

- Electric or cordless drill or screw gun
- Personal protective equipment
- Assorted wrenches
- Adjustable wrench
- Jack stands
- Floor jack
- Two $\frac{3}{8}$ " - 16 UNC self-tapping hex bolts x length as needed
- Adjustable pliers
- Measuring tape
- Grease pencil/non-permanent marker

Installation

⚠ WARNING

Do not go under the chassis/frame unless it is properly supported. Unsupported chassis/frames can fall and may result in death, serious personal injury, severe product or property damage.

Make sure chassis/frame is parked on solid, level ground. Clear all jack stand locations of debris and obstructions. Locations should also be free of depressions.

Fully Assembled Axle Sub-Frame

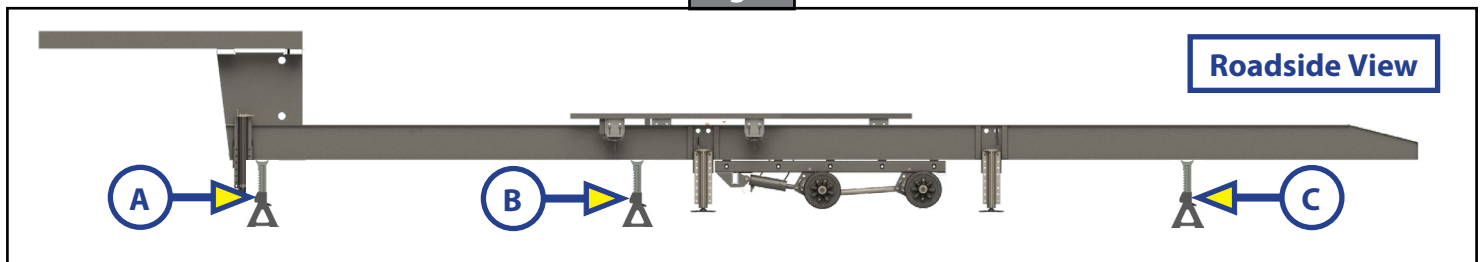
NOTE: Each OEM will have its own preferred method of positioning the trailer frame onto axle sub-frame. However, LCI recommends the following:

1. Lift front and rear of chassis/frame with floor jacks and stabilize with jack stands according to OEM recommendations.
2. Position one jack stand under both the front roadside and curbside corners of the chassis (Fig. 1A) to support the frame.

NOTE: It is possible to lift the main frame using an overhead crane or lift truck.

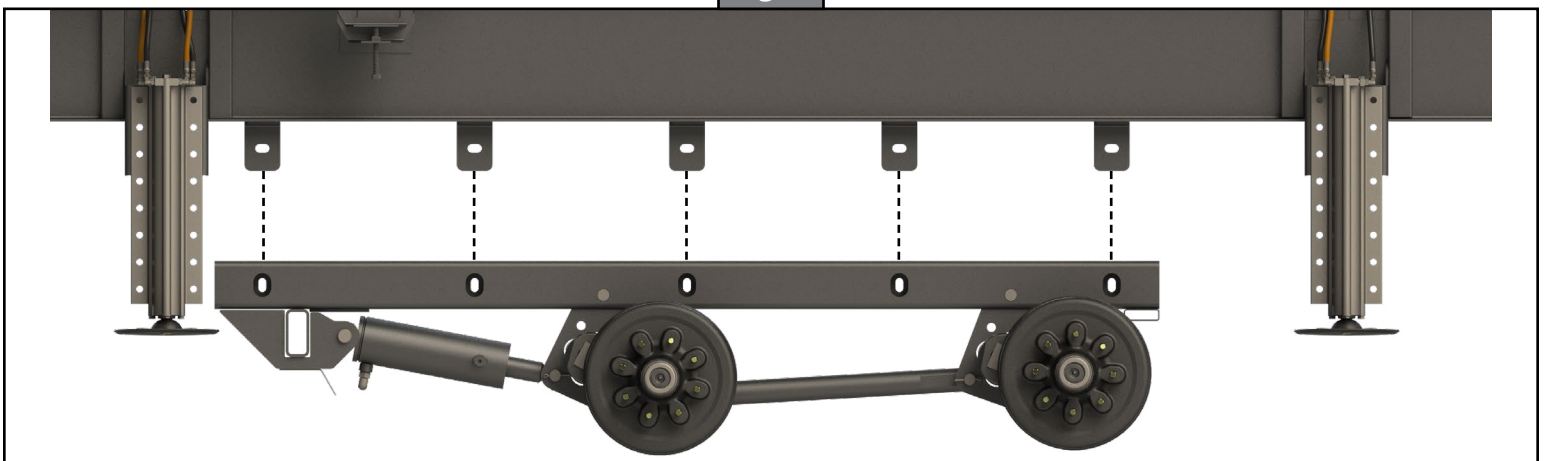
3. Position additional jack stands at the center (Fig. 1B) and rear (Fig. 1C) of chassis under both roadside and curbside to support the frame.

Fig. 1



4. Position the axle sub-frame under the frame rails and align the holes in the sub-frame with the holes in the ten axle hangers on the frame (Fig. 2).

Fig. 2



5. Lower the frame onto the axle sub-frame, and then onto the jack stands.
6. Bolt the sub-frame to the frame using the supplied bolts, washers and locking nuts then torque to 100-130 ft-lbs.

Installing the Hydraulic System

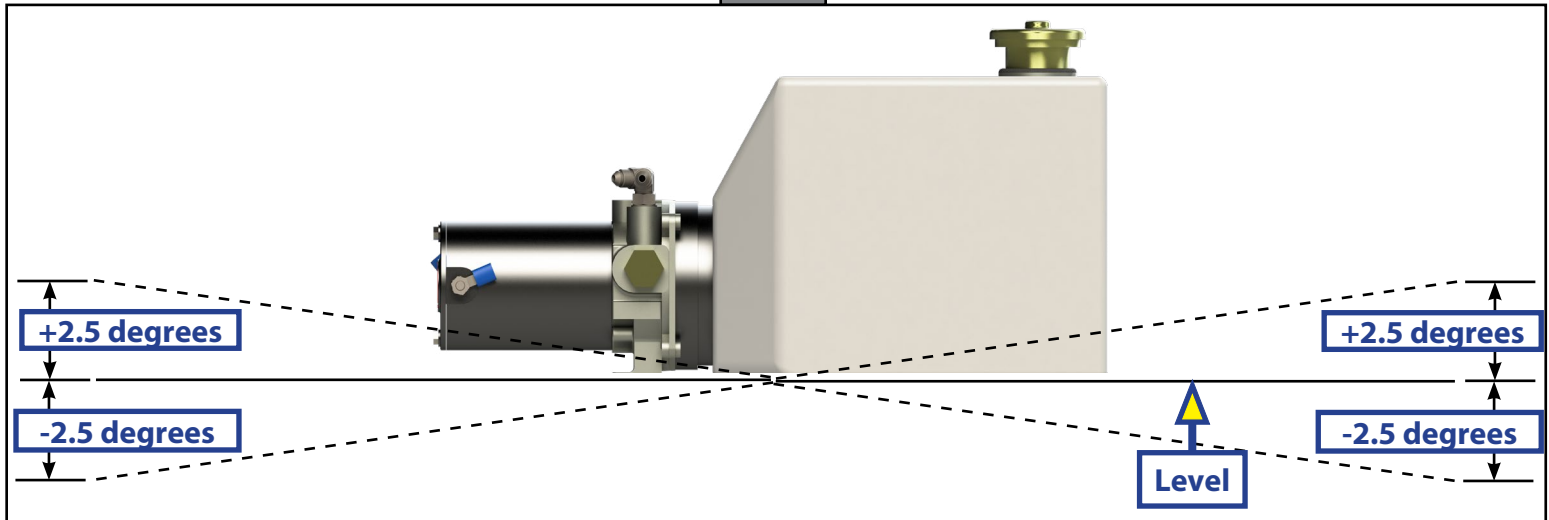
Install the Level-up System per OEM Installation Manual.

NOTE: Installation of the hydraulic power unit, fittings and hoses, should all take place in a clean and debris-free environment.

Installing the Hydraulic Power Unit

NOTE: The hydraulic power unit can be mounted in a horizontal or vertical position on the trailer, within five degrees (total) of level (Fig. 3) or plumb from a level trailer position.

Fig. 3



The hydraulic power unit should be mounted in the utility box (Fig.4A), which is indicated by the green lines. The utility box provides protection from the weather.

1. Fasten the hydraulic power unit onto a stable and solid surface using two OEM supplied 3/8" - 16 UNC self-tapping hex bolts x length as needed.

Fig. 4

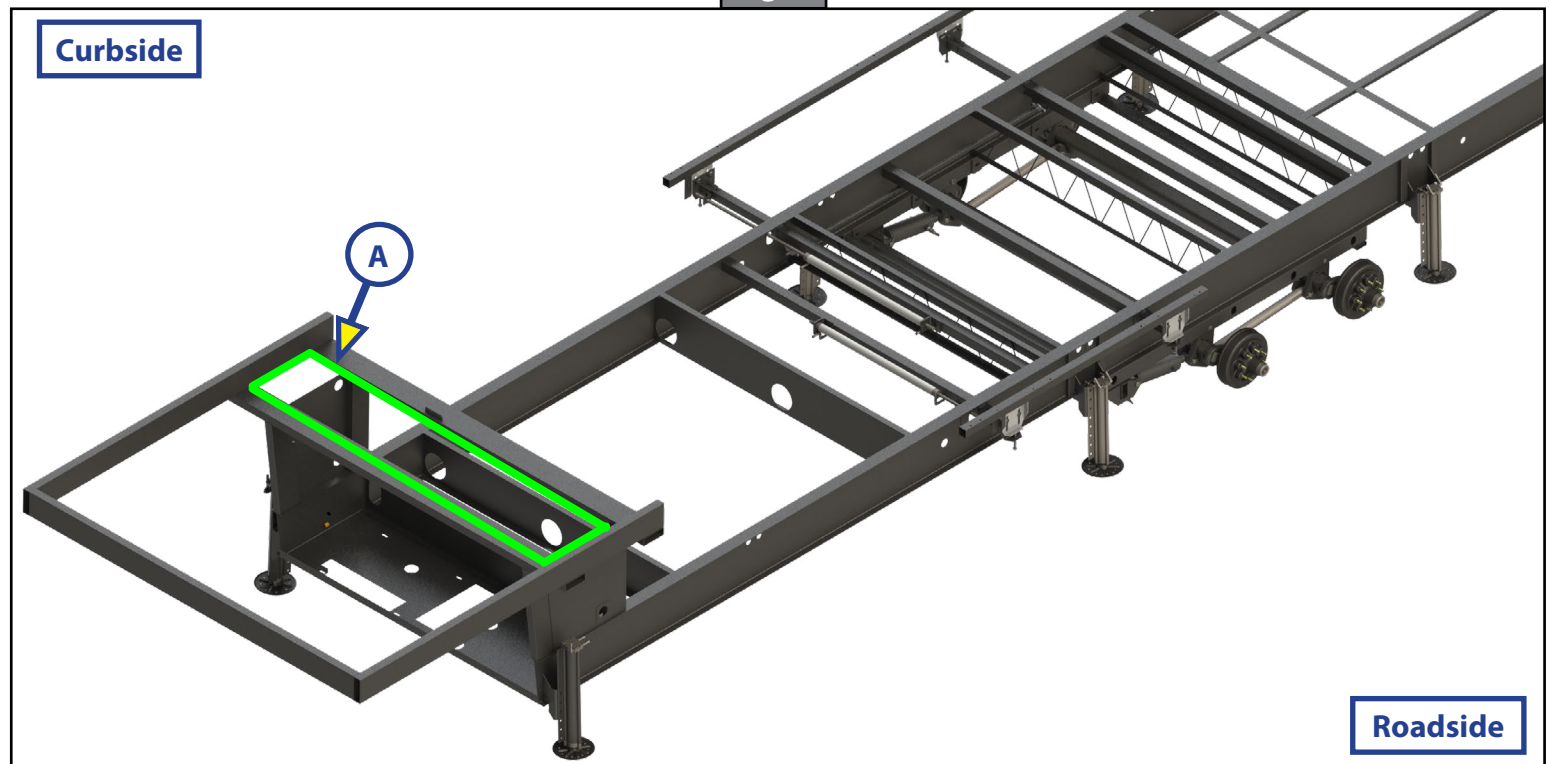
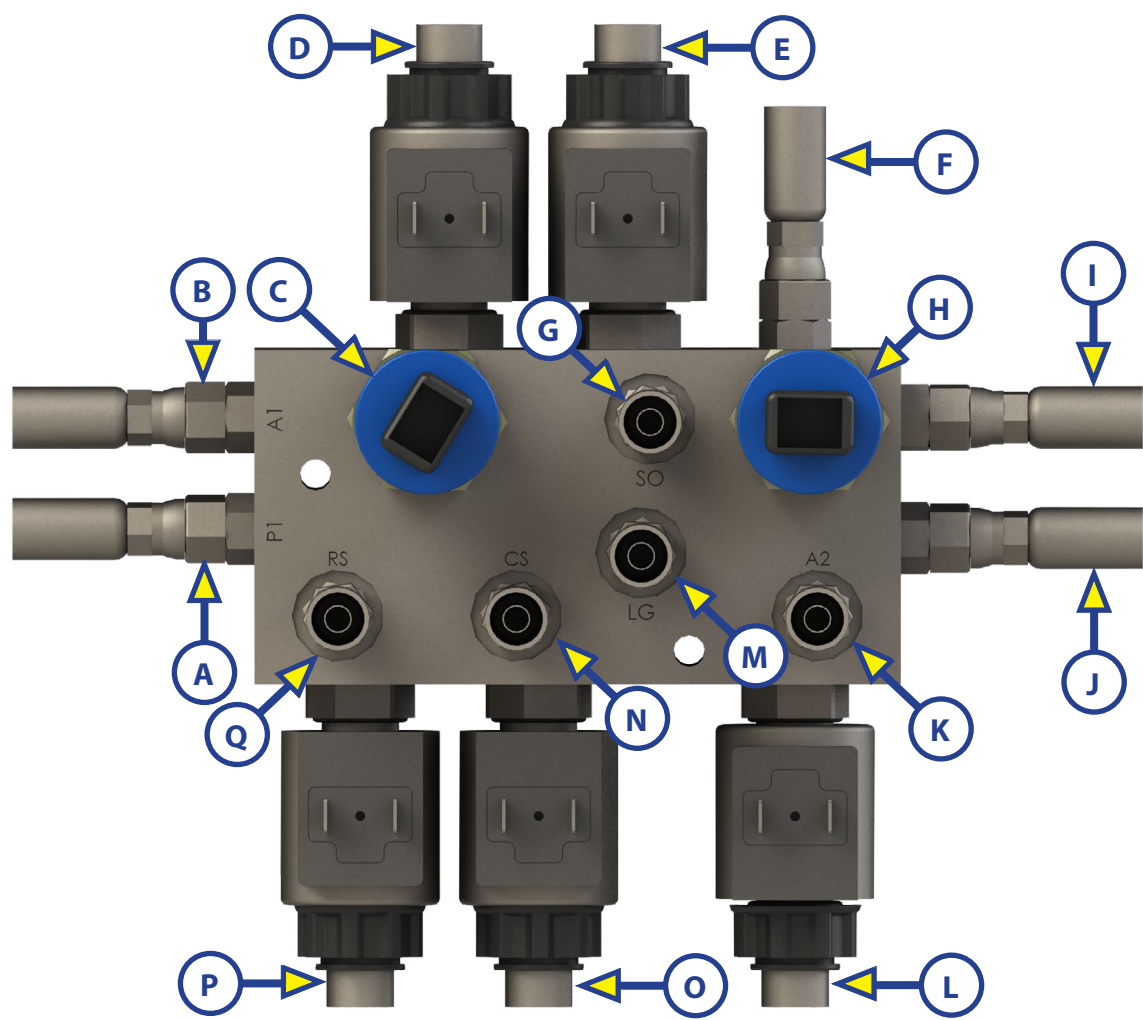


Fig. 5



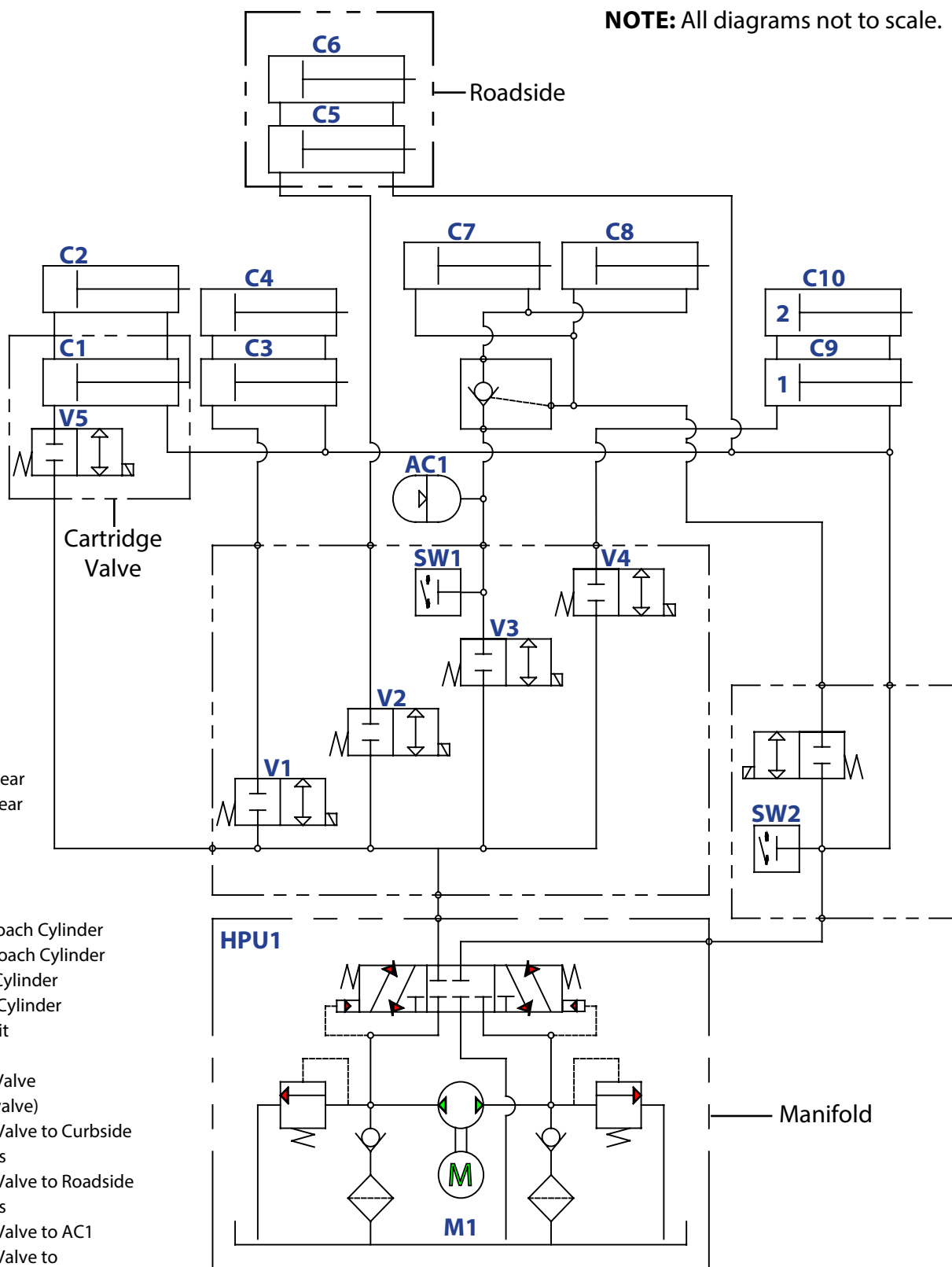
Callout	Manifold Port	Description
A	P1	Extend hose to hydraulic power unit
B	A1	Extend hose to accumulator
C	—	Easy Approach pressure switch
D	—	Easy Approach cartridge valve
E	—	Slide-out cartridge valve
F	—	Retract hose to hydraulic power unit
G	SO	Extend hose to slide-outs
H	—	Pressure switch
I	—	Retract hose for jacks/slide-outs
J	—	Retract hose for front jacks
K	A2	Retract hose to check valve for Easy Approach
L	—	Easy Approach cartridge valve
M	LG	Extend hose to front jack
N	CS	Extend hose to curbside jacks
O	—	Cartridge valve curbside jacks
P	—	Cartridge valve roadside jacks
Q	RS	Extend hose to roadside jacks

Hydraulic Routing

This document identifies the hydraulic routing for trailers equipped with the Easy Approach system, which includes leveling jacks and a slide-out system.

Fig. 6

NOTE: All diagrams not to scale.



Legend

Item#	Description
AC1	Accumulator
C1	Roadside Landing Gear
C2	Curbside Landing Gear
C3	Curbside Mid Jack
C4	Curbside Rear Jack
C5	Roadside Mid Jack
C6	Roadside Rear Jack
C7	Curbside Easy Approach Cylinder
C8	Roadside Easy Approach Cylinder
C9	Curbside Slide-out Cylinder
C10	Roadside Slide-out Cylinder
HPU1	Hydraulic Power Unit
M1	HPU Motor
SW1	Manifold Cartridge Valve (double blocking valve)
V1	Manifold Cartridge Valve to Curbside Mid- and Rear Jacks
V2	Manifold Cartridge Valve to Roadside Mid- and Rear Jacks
V3	Manifold Cartridge Valve to AC1
V4	Manifold Cartridge Valve to Curbside Slide-outs
V5	Curbside Landing Gear Cartridge Valve.

Fig. 7

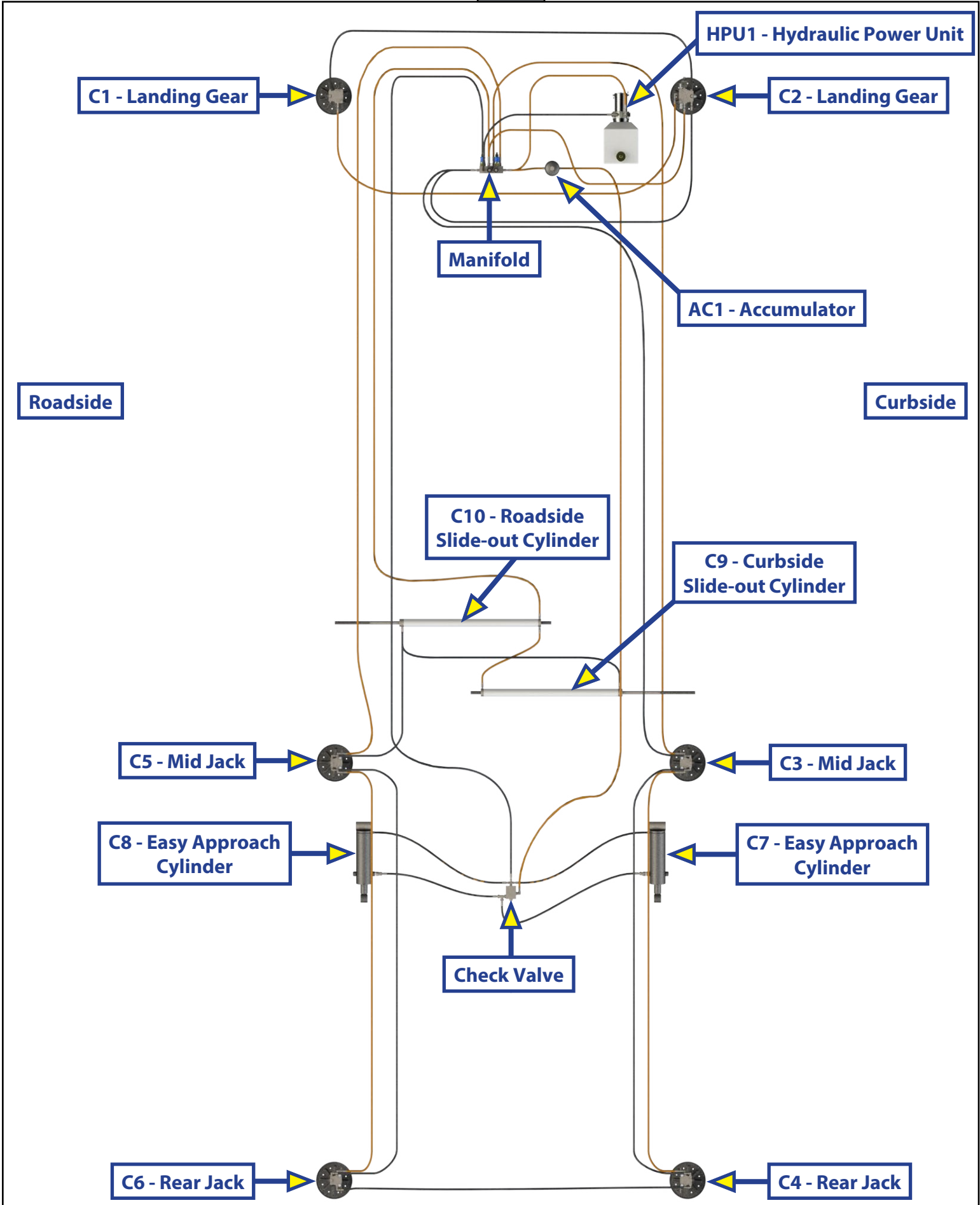


Fig. 8

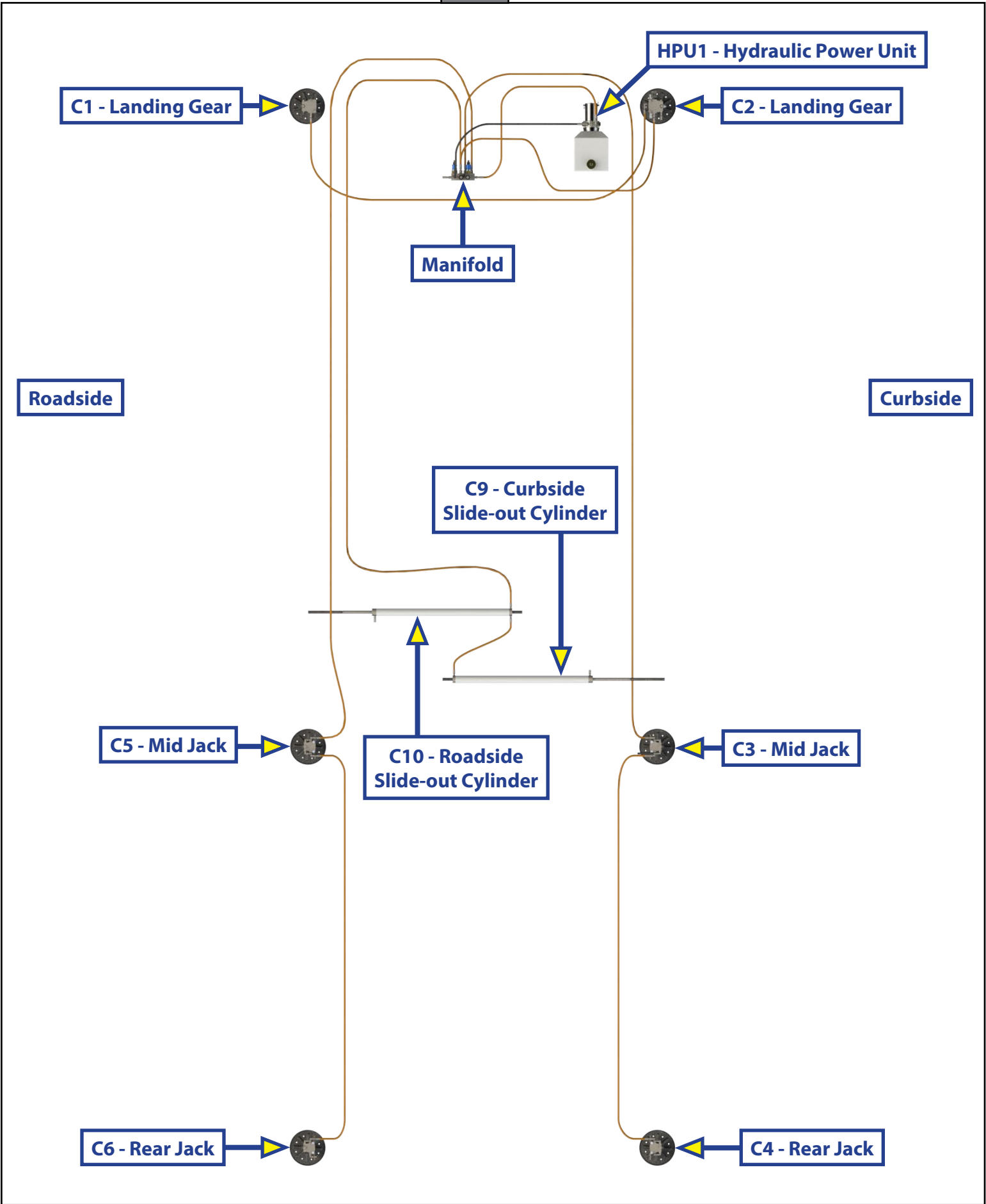


Fig. 9

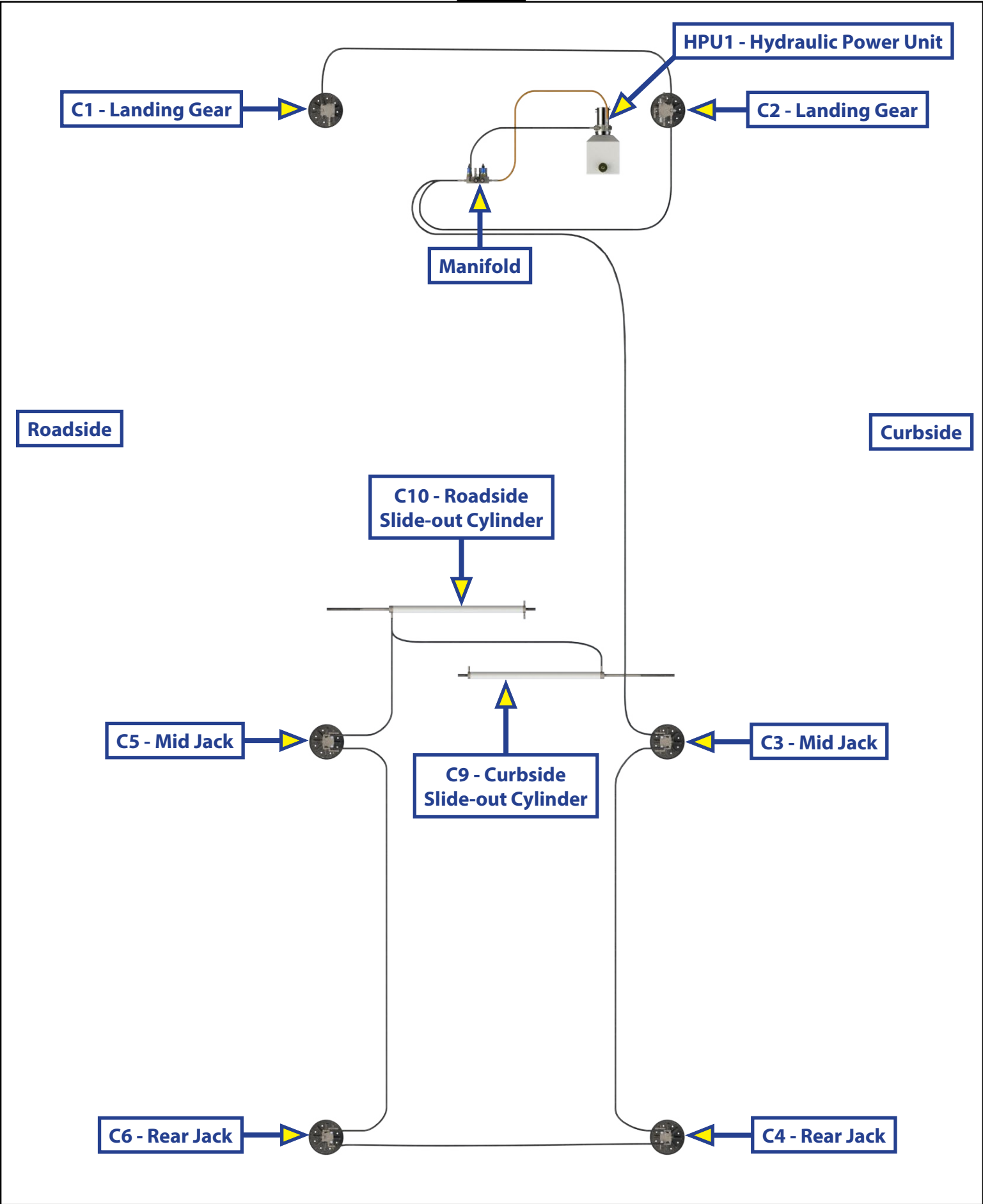
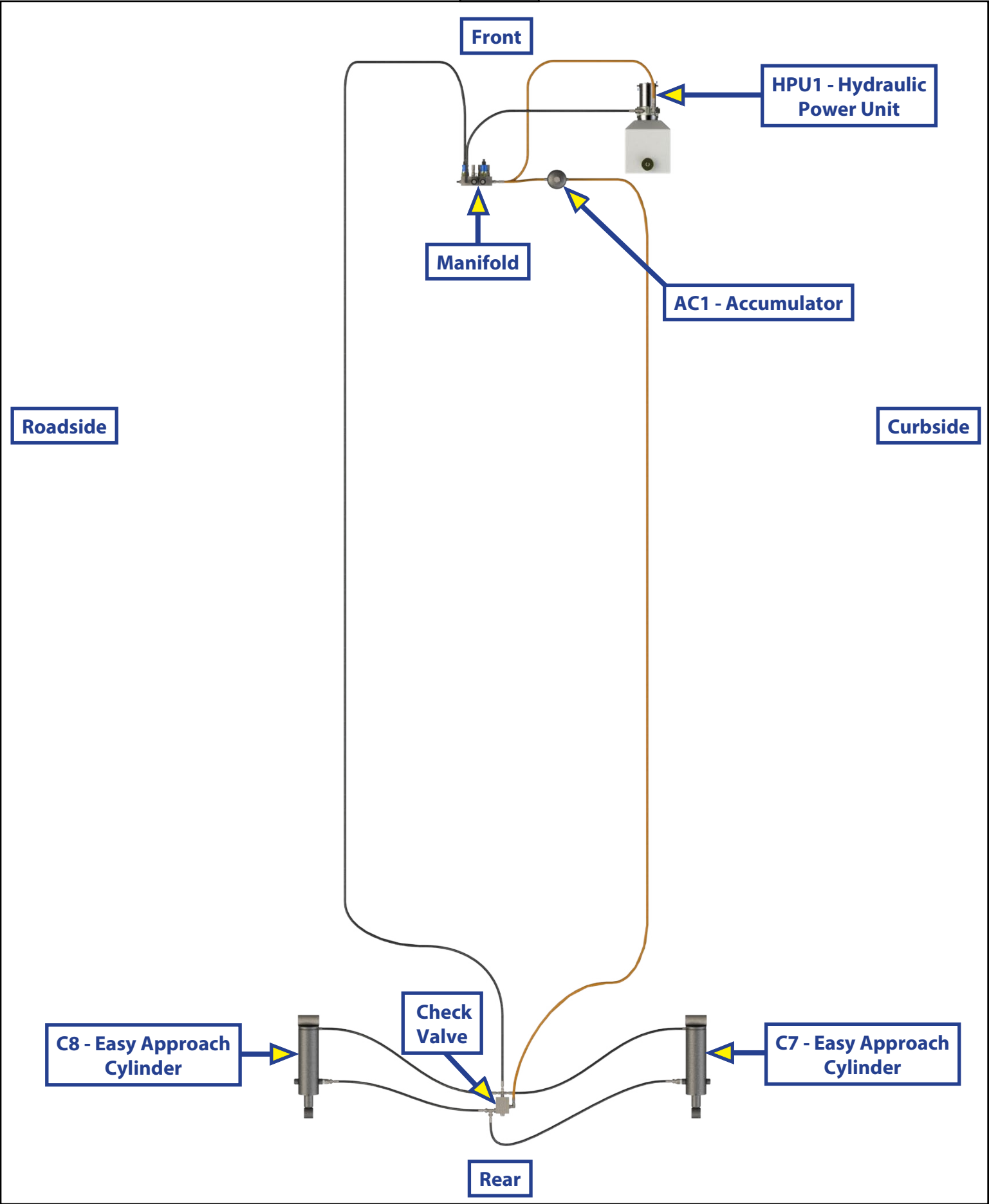


Fig. 10



Installing Hydraulic Hoses

NOTE: Some components have been removed for clarity.

NOTE: Avoid routing hydraulic hoses close to any and all heat sources, if at all possible.

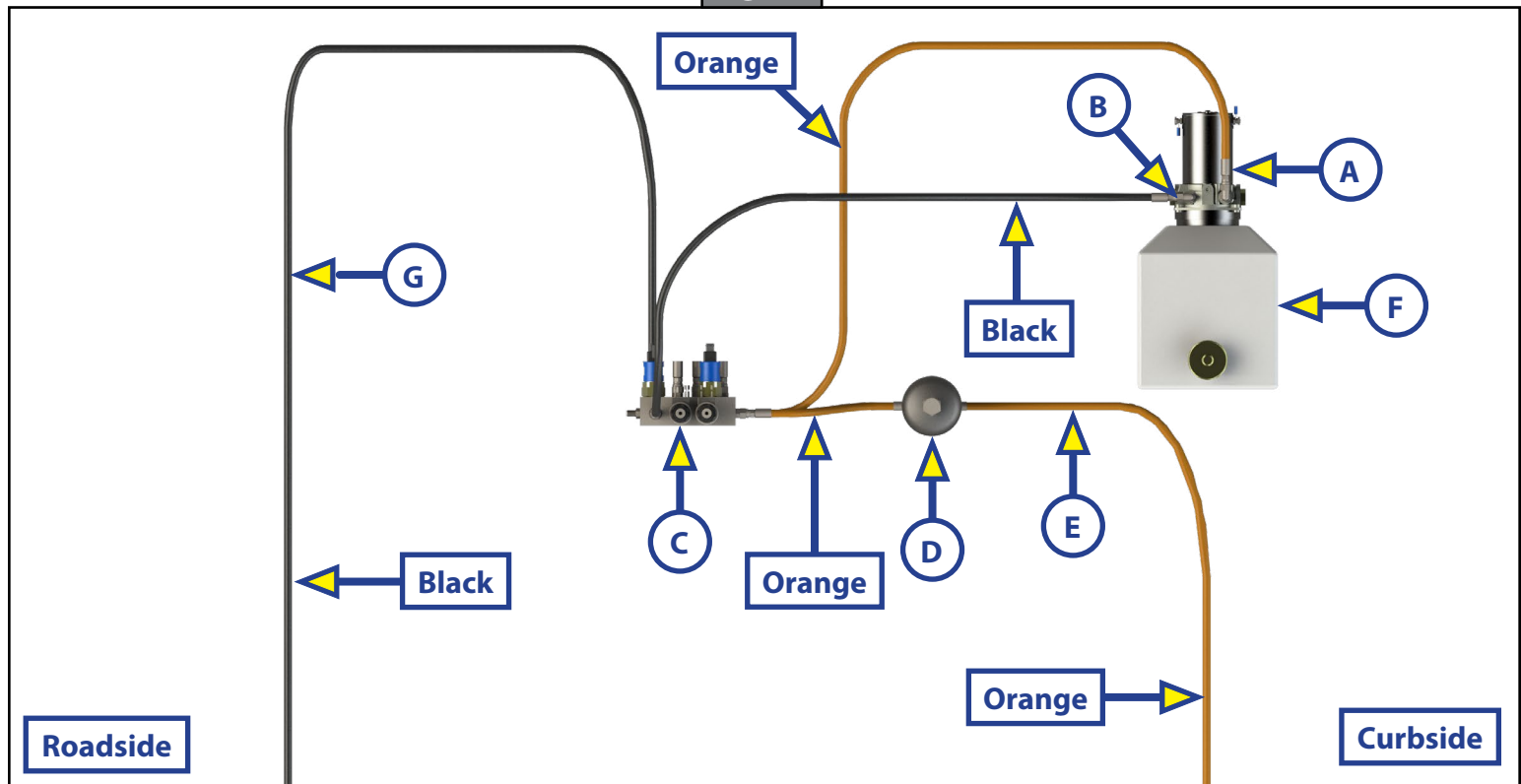
NOTE: Make sure to torque all fittings to 18-22.5 ft-lbs. Torque values are for wet (lubricated) installation of fasteners.

After the hydraulic power unit, manifold, and check valve manifold have been mounted to the frame, connect the hydraulic hoses.

Easy Approach System

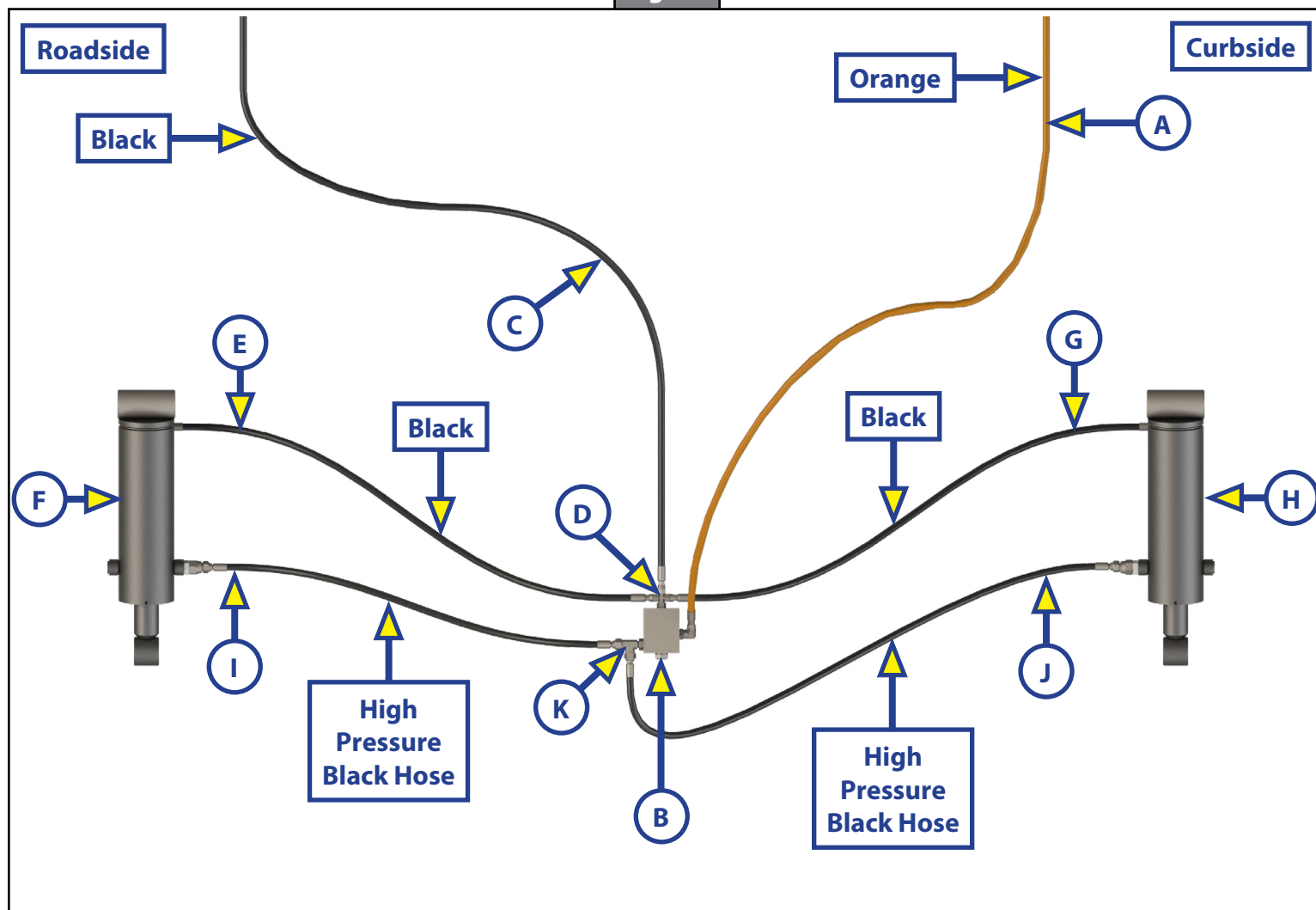
1. Connect orange hose to the extend port (Fig. 11A) on the hydraulic power unit (Fig. 11A), then connect the other end to port P1 on the manifold (Fig. 11C).
2. Connect orange hose from manifold port A1 (Fig. 11C) to the accumulator (Fig. 11D).
3. Connect an orange hose (Fig. 11E) to the accumulator.
4. Connect black hose to the retract port (Fig. 11B) on the hydraulic power unit (Fig. 11F), then connect the other end to manifold A2 (Fig. 11C).
5. Connect black hose (Fig. 11G) to port A2 on the manifold.

Fig. 11



6. Take the orange hose (Fig. 12A) that was connected to the accumulator (Fig. 11D) in step 3 and connect it the check valve (Fig. 12B).
7. Take the black hose (Fig. 12C) that was connected to the manifold port A2 in step 4 and connect it to the center port of the cross fitting (Fig. 12D) that is attached to the check valve.
8. Connect a black hose (Fig. 12E) to the roadside of the cross fitting (Fig. 12D), then connect the other end to the cylinder extend port on the roadside Easy Approach cylinder (Fig. 11F).
9. Connect a black hose (Fig. 12G) to the curbside of the cross fitting (Fig. 12D), then connect the other end to the cylinder extend port on the curbside Easy Approach cylinder (Fig. 12H).
10. Connect a high pressure black hose (Fig. 12I) to the T-fitting (Fig. 12K), then connect the other end to the cylinder retract port on the roadside Easy Approach cylinder (Fig. 12F).
11. Connect a high pressure black hose (Fig. 12J) to the T-fitting (Fig. 12K), then connect the other end to the cylinder retract port on the curbside Easy Approach cylinder (Fig. 12H).

Fig. 12

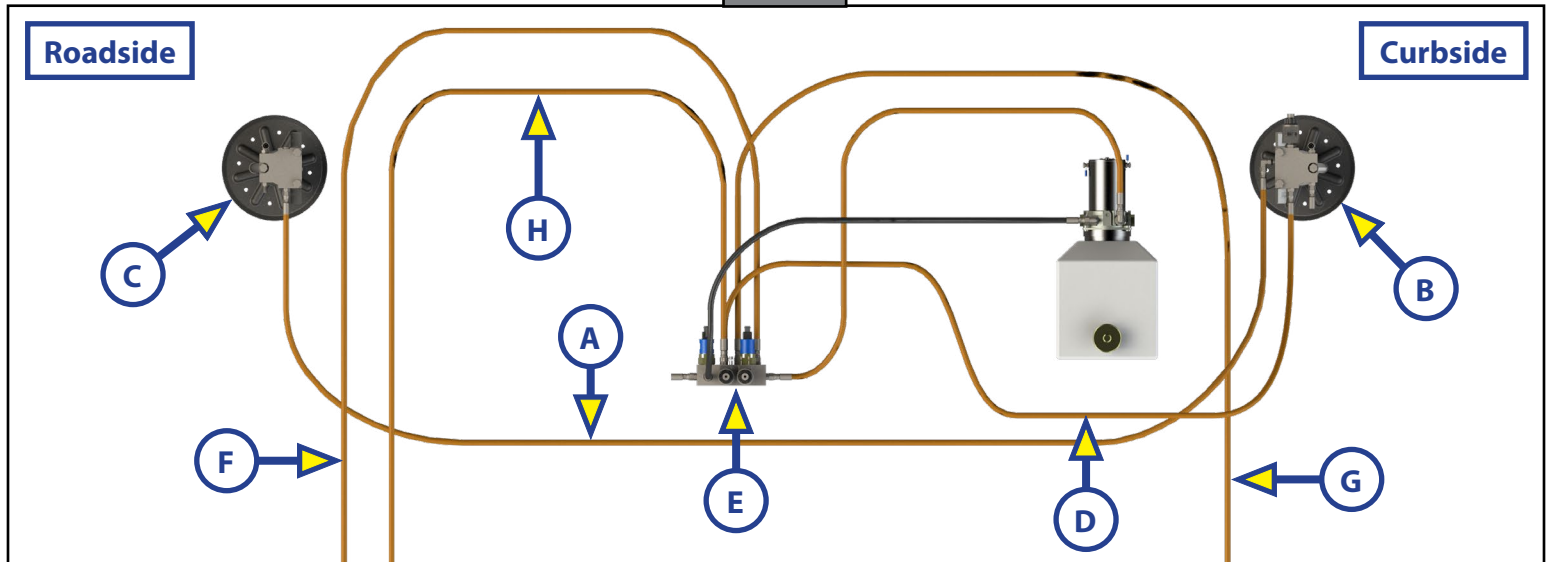


Jacks/Slideouts - Extend

NOTE: Some components have been removed for clarity.

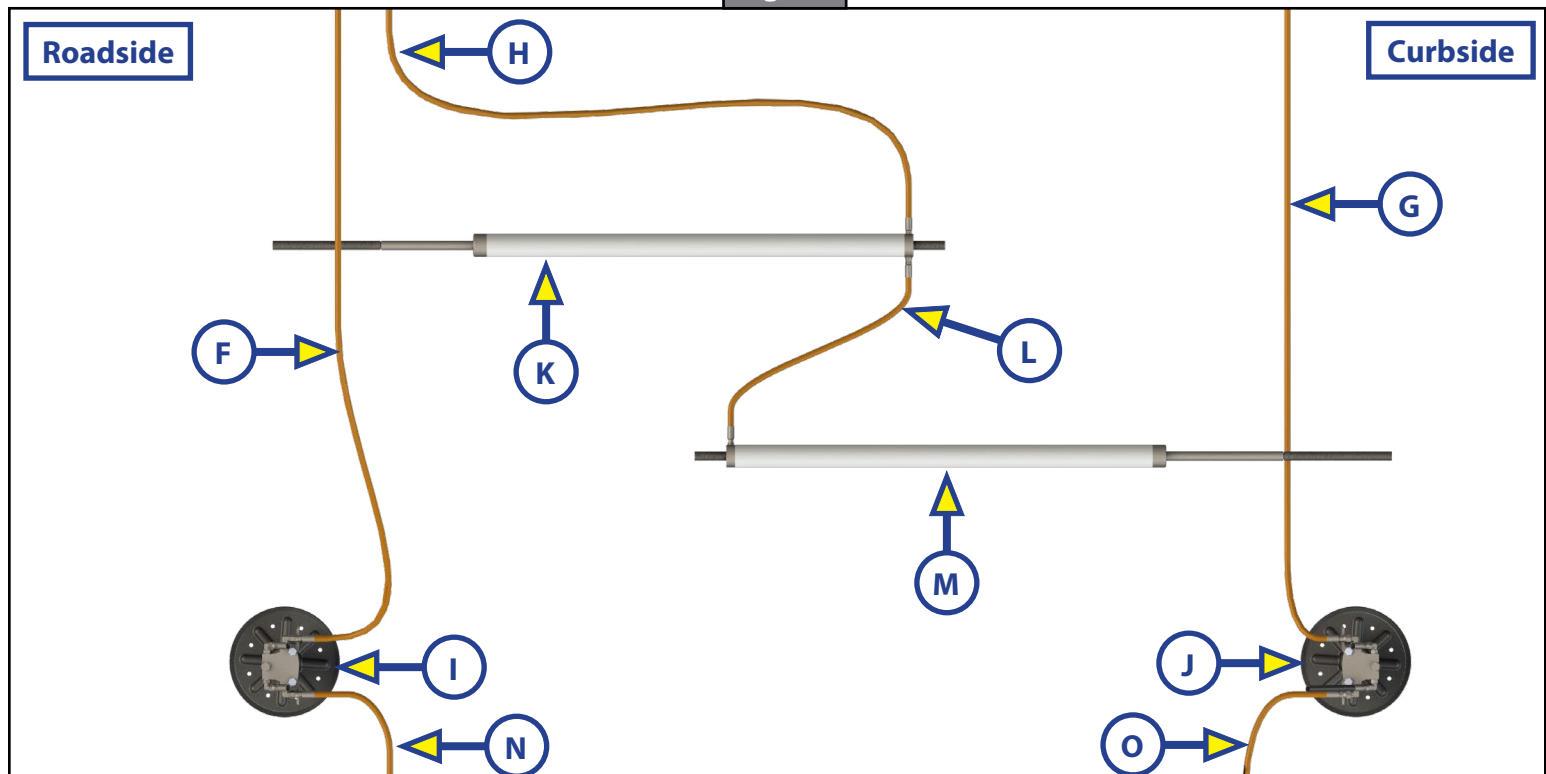
1. Connect orange hose (Fig. 13A) to an extend port on the front lead landing gear (Fig. 13B), then connect the other end to the extend port on the front follow landing gear (Fig. 13C).
2. Connect orange hose (Fig. 13D) to the other extend port on front landing gear (Fig. 13B) then connect the other end to the port LG on the manifold (Fig. 13E).

Fig. 13



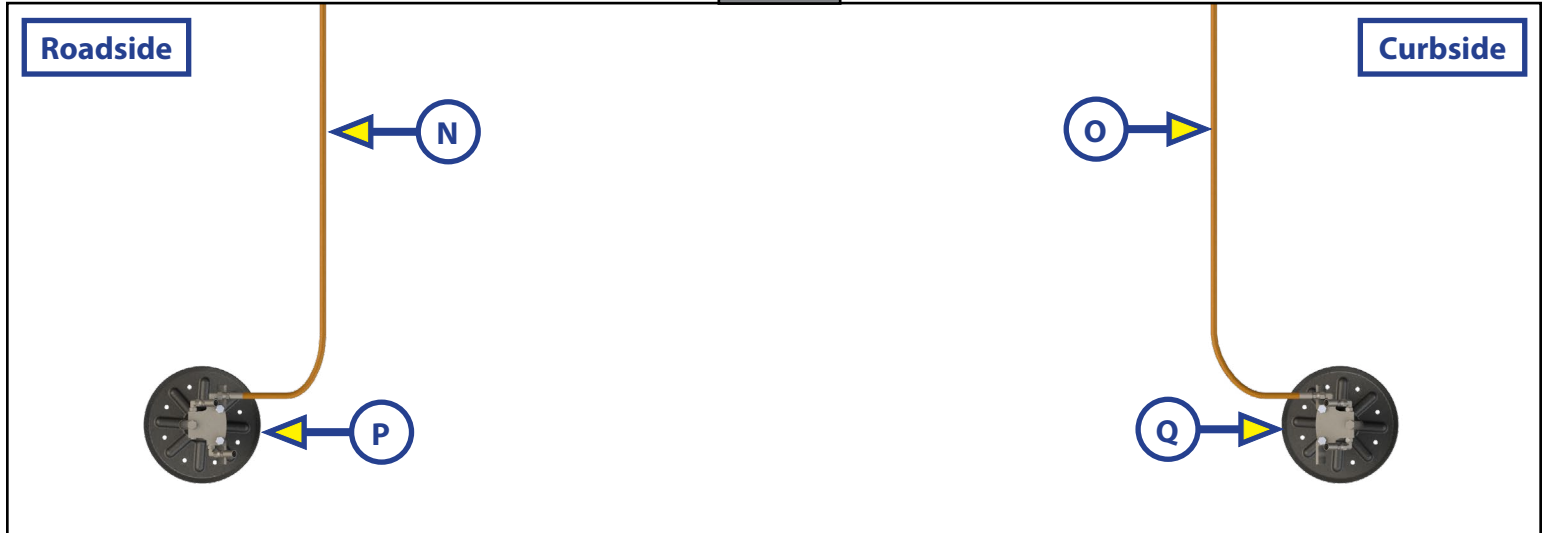
3. Connect two orange hoses (Figs. 13F and 13G) to the manifold ports RS for roadside jacks and CS (for curbside jacks (Fig. 13E). These hoses will connect to the mid-jacks (Figs. 14I and 14J).
4. Connect orange hose (Fig. 13H) to the manifold port SO for slide-outs. This hose (Fig. 14H) will connect to the lead slide-out cylinder extend port (Fig. 14K).
5. Connect orange hose (Fig. 14L) from the extend port on the lead slide-out (Fig. 14K) to the extend port on the follow slide-out (Fig. 14M).

Fig. 14



6. Connect orange hose (Fig. 14N) from extend port on the roadside mid jack (Fig. 14I) to extend port on rear jack (Fig. 15P).
7. Connect orange hose (Fig. 14O) from extend port on the curbside mid jack (Fig. 14J) to extend port on rear jack (Fig. 15Q).

Fig. 15

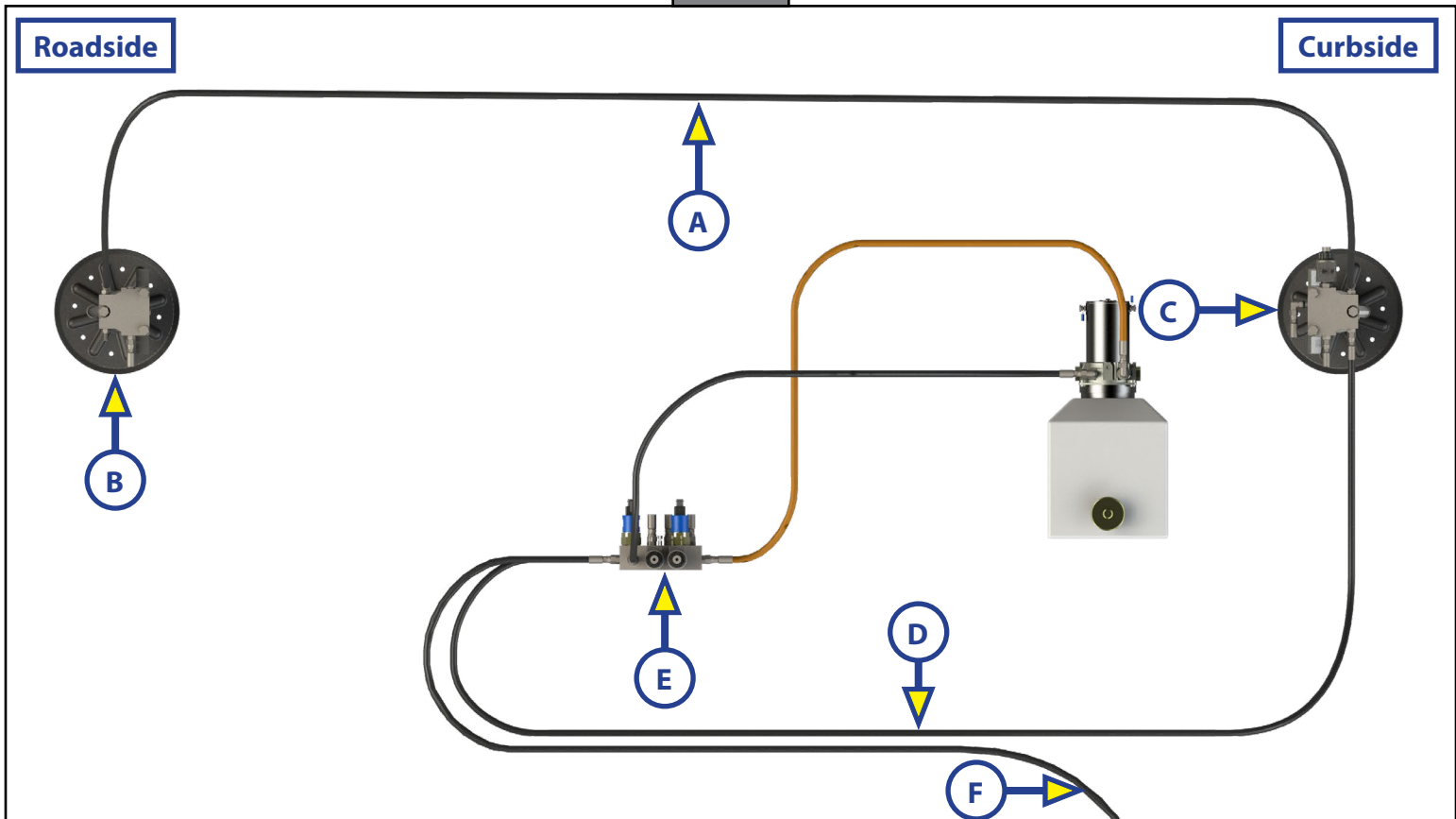


Jacks/Slideouts - Retract

NOTE: Some components have been removed for clarity.

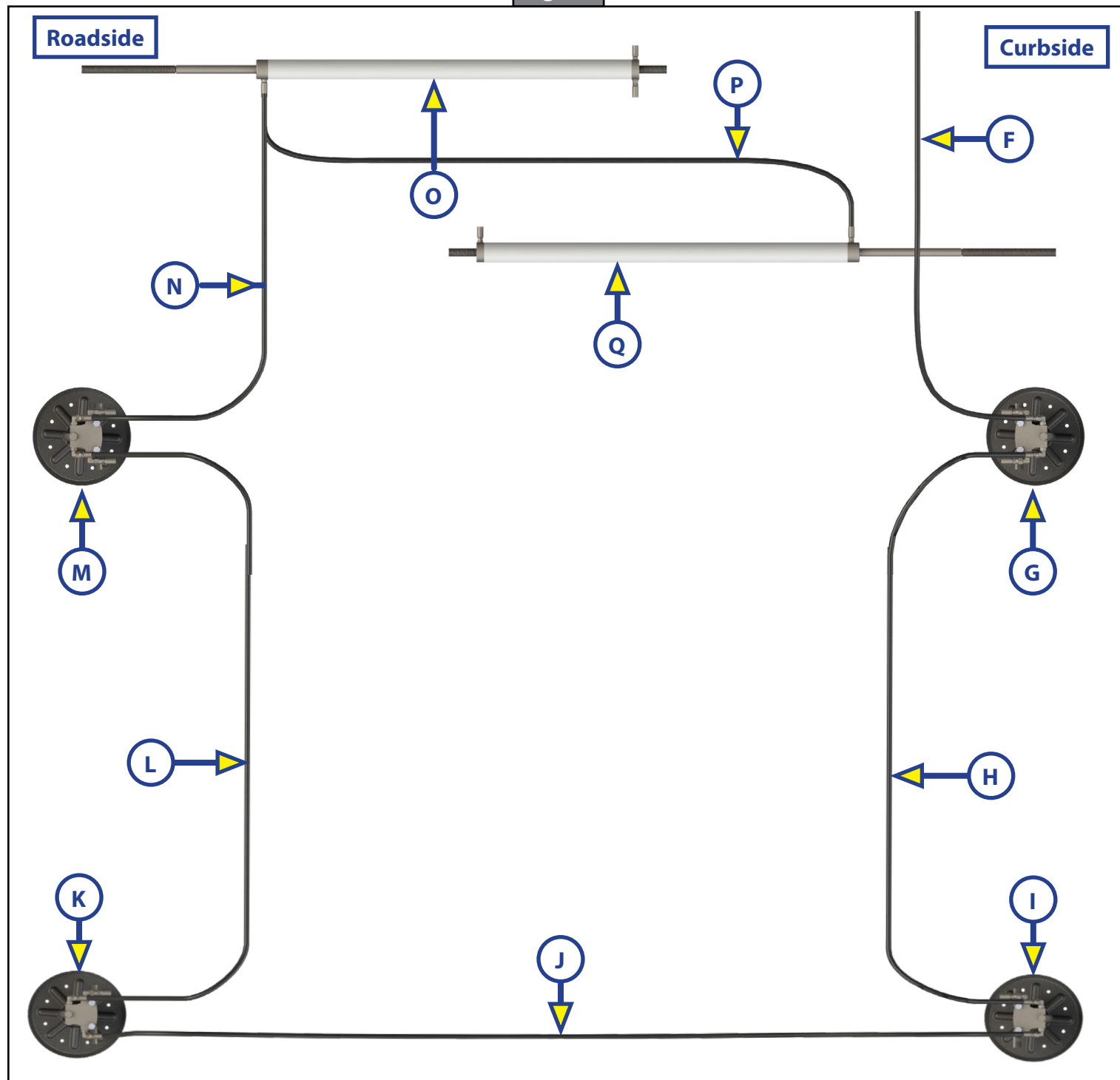
1. Connect black hose (Fig. 16A) to a retract port on the front lead landing gear (Fig. 16C) then connect the other end to a retract port on the front follow landing gear (Fig. 16B).
2. Connect black hose (Fig. 16D) to a retract port on front lead landing gear (Fig. 16C) then connect the other end to a retract port on the manifold (Fig. 16E).
3. Connect black hose (Fig. 16F) to a retract port on the manifold (Fig. 16E).

Fig. 16



4. Take the retract hose (Fig. 16F) connected to the manifold (Fig. 16E) in Step 3 and connect to a retract port on curbside mid-jack (Fig. 17G).
5. Connect black hose (Fig. 17H) to a retract port on the curbside mid-jack (Fig. 17G), then connect to a retract port on the curbside rear jack (Fig. 17I).
6. Connect black hose (Fig. 17J) to a retract port on the curbside rear jack (Fig. 17I) and then connect the other end to a retract port on the roadside rear jack (Fig. 17K).
7. Connect black hose (Fig. 17L) to a retract port on the roadside rear jack (Fig. 17K), then connect the other end to a retract port on the roadside mid-jack (Fig. 17M).
8. Connect black hose (Fig. 17N) to the a retract port on the roadside mid-jack (Fig. 16M), then connect the other end to the retract port on the lead slide-out cylinder (Fig. 17O).
9. Connect black hose (Fig. 17P) to the retract port on the lead slide-out cylinder (Fig. 17O) then attach to the retract port on the follow slide-out cylinder (Fig. 17Q).

Fig. 17



Filling and Purging the Hydraulic System

NOTE: The hydraulic fluid requirement is Dexron III ATF. For a list of alternative fluids, see Lippert Technical Information Sheet [TI - 188: Hydraulic Operation Fluid Recommendation](#). To obtain this Technical Information sheet online, go to: <https://www.lci1.com/support-low-entry-axle>, click on the Technical Information Sheets tab and then select TI-188: Hydraulic Operation Fluid Recommendation from the listed documents..

1. Start with all hydraulic components in the fully retracted position, meaning the trailer is raised as if it were ready to travel.
2. Fill the reservoir until the fluid is about 1/4" from the top of the reservoir and no more than 1/2" from the top.
3. If there is no froth or foam in the reservoir and the fluid is not within 1/2" of the top, fill the reservoir to within the level described in step 2.
4. With the fluid level full and no foam in the reservoir, begin cycling the hydraulic system up and down.

NOTE: After completing one up-and-down cycle and with the hydraulic cylinders fully retracted, note if there are any bubbles, froth or foam on top of the hydraulic fluid. This is an indication that air has been pushed back to the reservoir when the hydraulic components were retracted in the last cycle. Wait 15-20 minutes for the foam to dissipate before beginning the purge process again.

5. Check the reservoir for foam. If foam is present, see **NOTE** above and repeat steps 3 and 4. Repeat these steps until no foam is present in the reservoir. If no foam is present, the purge process is completed.

Operation

WARNING

Keep people and pets should be clear of chassis while operating the Easy Approach system.

CAUTION

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

Ensure proper production installation by operating the Easy Approach system as follows:

1. Make sure the chassis is parked on solid ground.
2. Clear area under trailer of debris and obstructions.
3. Locations should also be free of depressions. When parking chassis on extremely soft surfaces, utilize load distribution pads under rear of the chassis.

NOTE: Extending the cylinders (retract on the rocker switch) will lower the trailer bed for loading and unloading. Retracting the cylinders (extend on the rocker switch) maximum length will raise the trailer bed ready for travel.

Switch and Wiring Installation

1. Install the Easy Approach and Slide-out rocker switches.
2. Connect the controller/wiring harness to the solenoid (Fig. 18) and the manifold (Fig. 19).
3. Connect wires from the solenoid to motor posts 1 and 2 on the HPU.
4. Connect ground wire from solenoid to battery.
5. Connect power wire from solenoid to battery.

Fig. 18

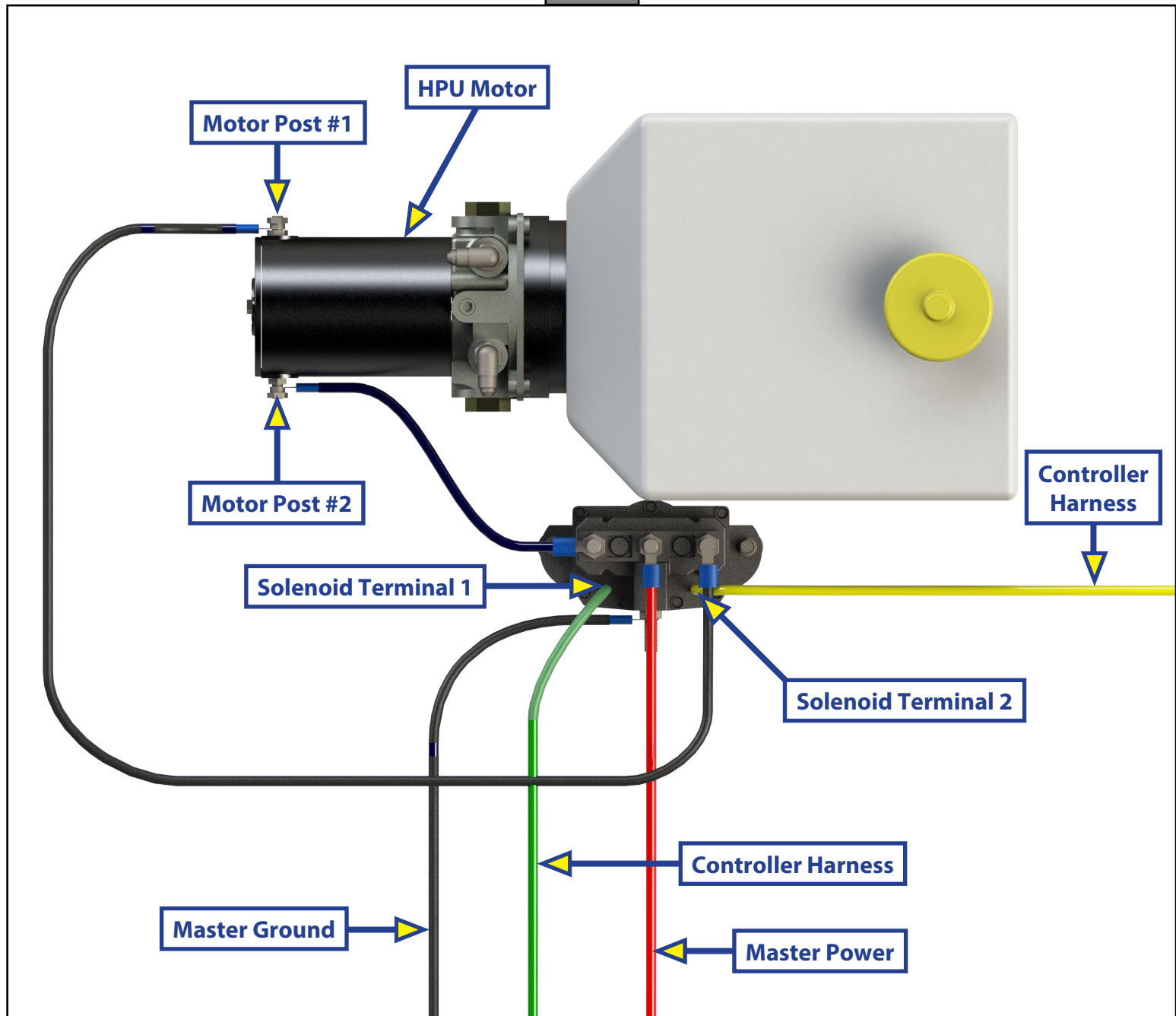
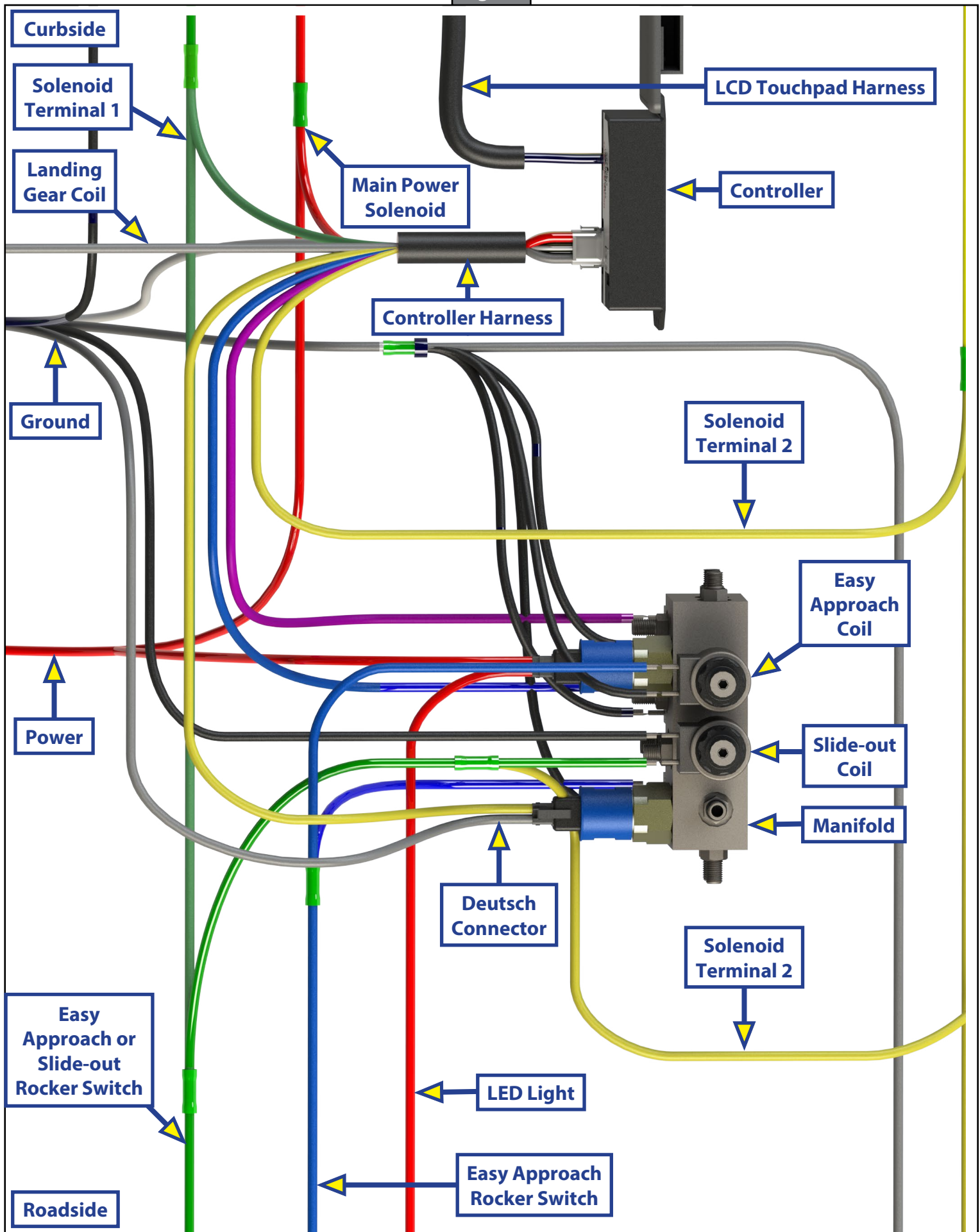
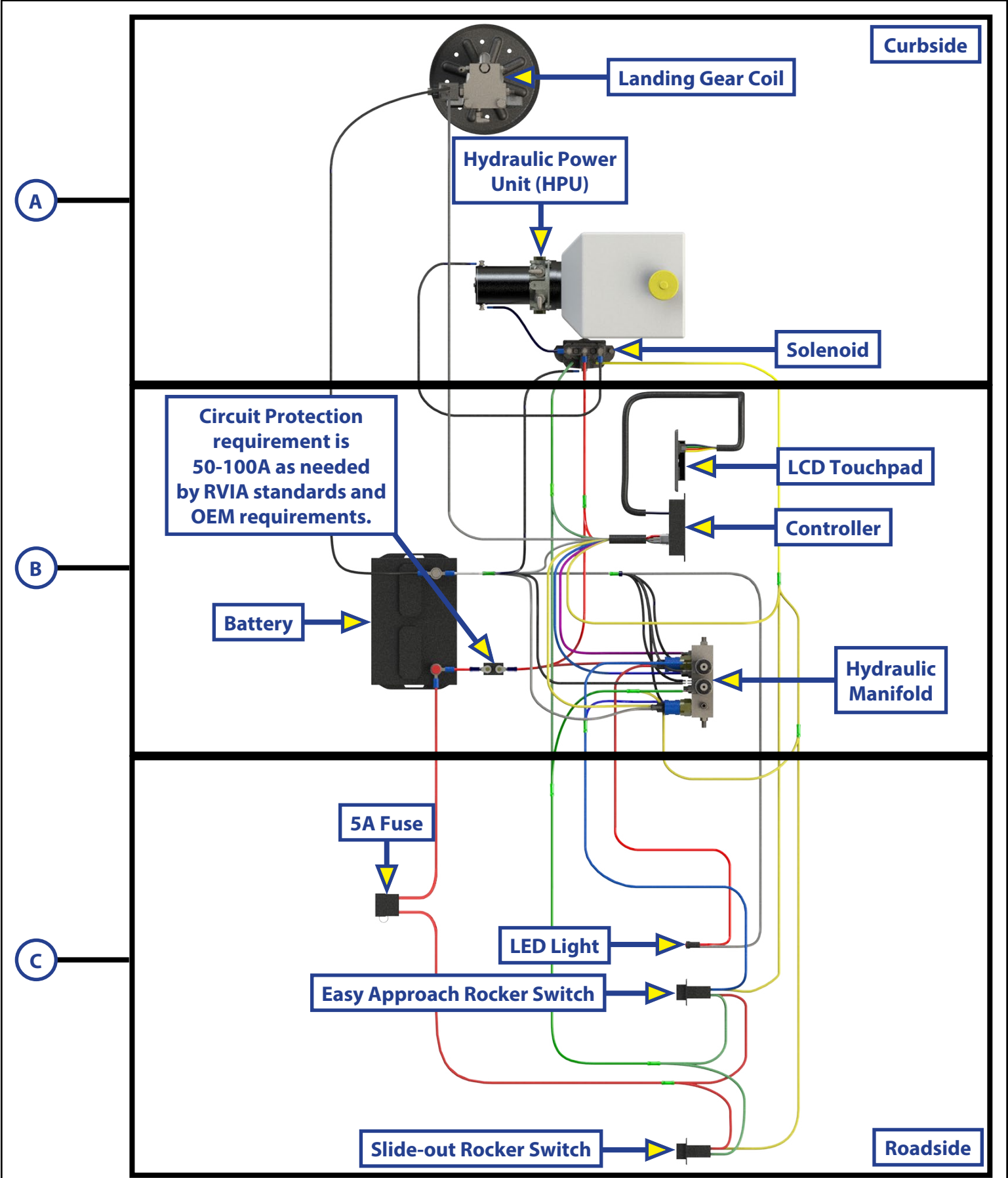


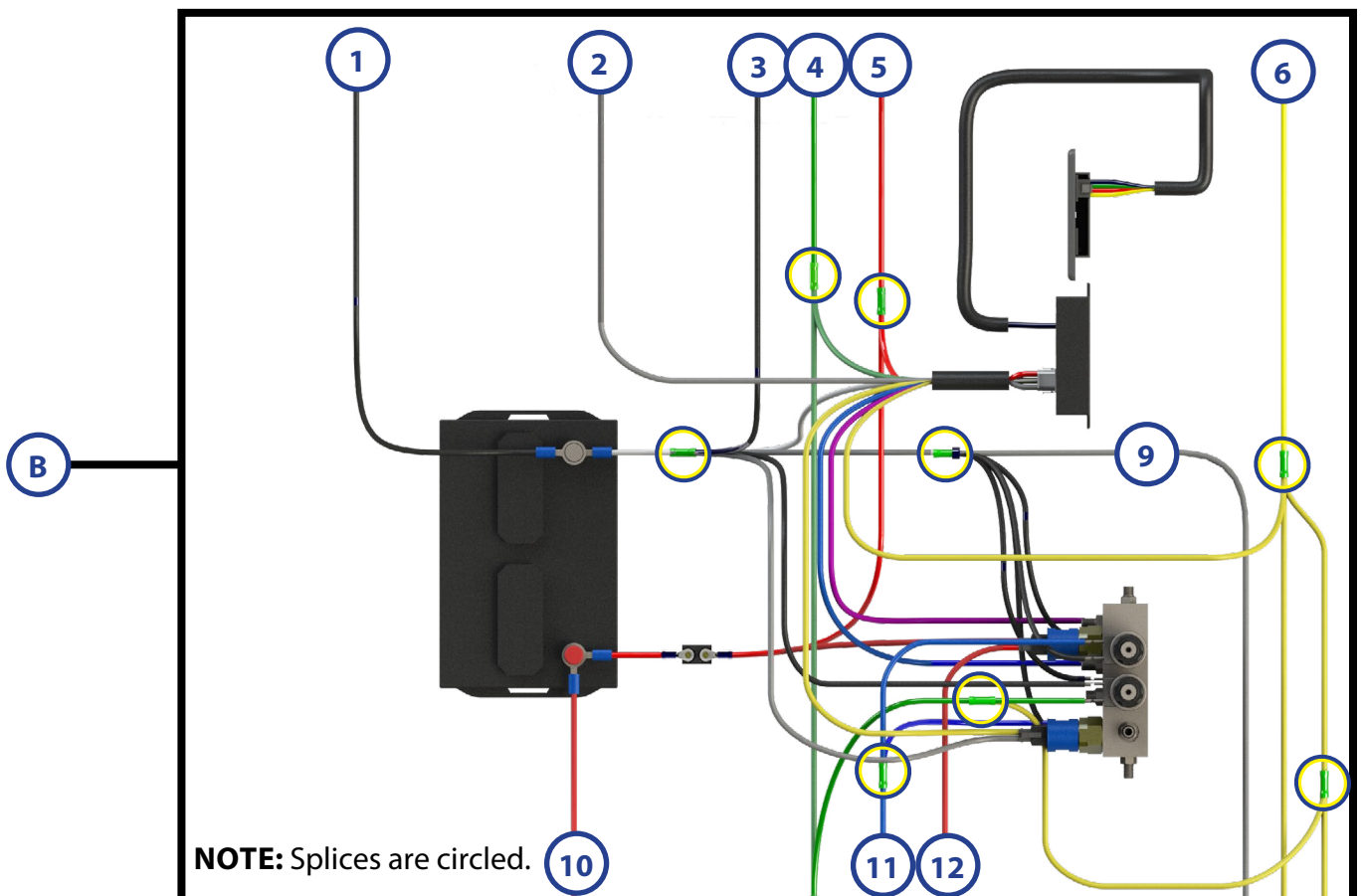
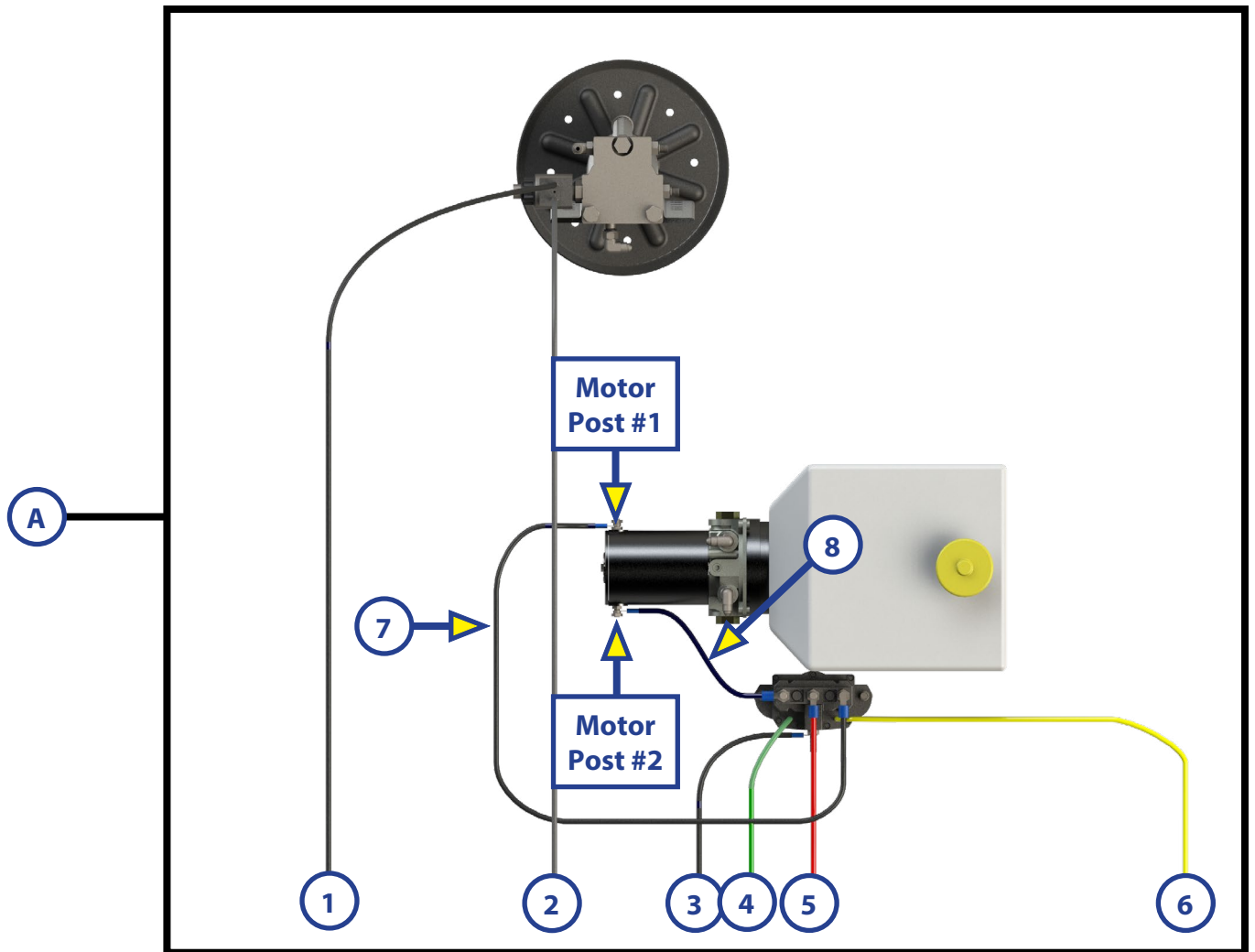
Fig. 19

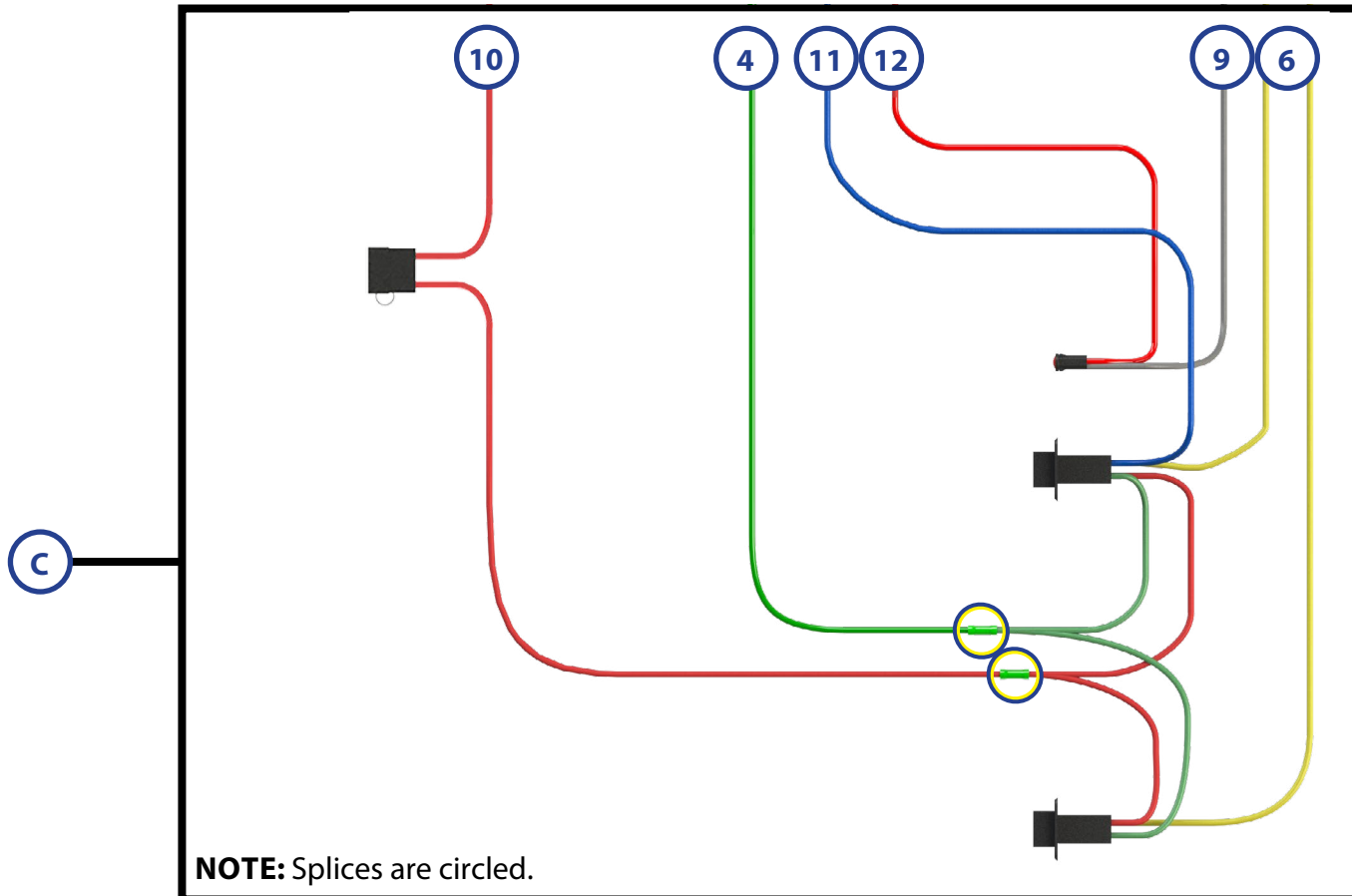


NOTE: Electrical routing (Fig. 20) shown is for reference only. OEM wiring colors may vary.

Fig. 20







Wiring Diagram Legend		
Callout Number	Routing From	Routing To
A1-B1	Battery	Landing Gear
A2-B2	Controller	Landing Gear
A3-B3	Solenoid	Battery
A4-B4-C4	Solenoid	All Switches
A5-B5	Solenoid	Battery and Controller
A6-B6-C6	Solenoid	LCD Touchpad, Controller and All Switches
A7	Solenoid	HPU Motor Post #1
A8	Solenoid	HPU Motor Post #2
B9-C9	Battery	LED Light
B10-C10	Battery	All Switches
B11-C11	Controller	Easy Approach Rocker Switch
B12-C12	Controller	LED Light

Operation

Lowering the Trailer

⚠ CAUTION

Verify that the rear jacks are fully retracted before lowering the trailer with the Easy Approach system.

⚠ CAUTION

Unhitch the trailer from the tow vehicle before raising or lowering the trailer with the Easy Approach system.

⚠ CAUTION

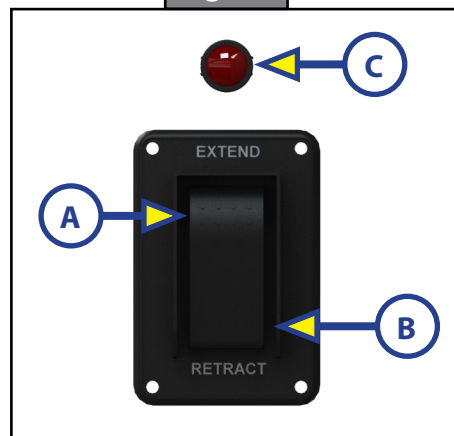
Fully raise the trailer prior to operating the leveling system.

If the trailer is unhitched from the tow vehicle and the rear jacks are retracted, the trailer can be lowered using the Easy Approach system.

NOTE: The landing gear does not need to be retracted to lower the trailer.

1. Press and hold the RETRACT side (Fig. 21B) of the rocker switch. This will lower the axles on the subframe, lowering the trailer for loading and unloading. The LED light (Fig. 21C) above the rocker switch will stay lit while the Easy Approach system is operational.
2. Continue to lower the trailer until axle motion has stopped. When the trailer is fully lowered, there will be a gap between the bottom of the trailer and the ground.

Fig. 21



Raising the Trailer

⚠ CAUTION

Do not travel until the trailer has been raised to the maximum height and the warning LED light is off.

If the trailer is unhitched from the tow vehicle and the rear jacks are retracted, the trailer can be raised using the Easy Approach system.

1. Press and hold the EXTEND side (Fig. 21A) on the rocker switch to raise the axles of the sub-frame chassis, which raises the trailer to the maximum height. The LED light (Fig. 21C) above the rocker switch will turn off when the trailer is in drive-ready position.
2. The trailer can now be hitched to the tow vehicle using the LCD or AUTO LEVELING CONTROL touchpad hitch recognition procedure described in the LCD Touchpad or Auto Leveling Control/Hitch Recognition - Reconnecting to Tow Vehicle section or the OneControl procedure.

Manual Override

The LCI Level-Up® LCD 5th Wheel Leveling and Easy Approach systems can be manually operated with an electric drill. In the event of electrical or system failure, this manual override method of extending and retracting the jacks or raising and lower the trailer using Easy Approach can be used.

NOTE: Leveling jacks must be fully retracted prior to manual override of the Easy Approach System.

NOTE: LCI does not recommend manually extending (raising) the trailer using the Easy Approach system while it is loaded.

NOTE: Do not use an impact gun to perform any of the override procedures as this may damage the motor.

NOTE: Disconnect the power unit motor from the power source prior to attempting the manual override procedure.

1. Locate the valves that are paired with the system to be manually overridden.

A. Landing Gear - Valve located on the lead landing gear (Fig. 22A).

B. Leveling Jacks - Valves RS and CS are located on manifold (Fig. 23A).

Fig. 22

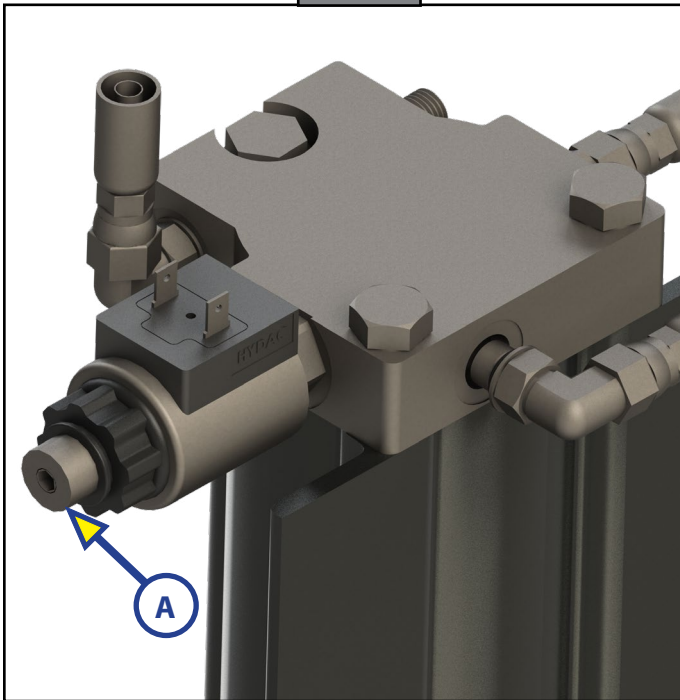
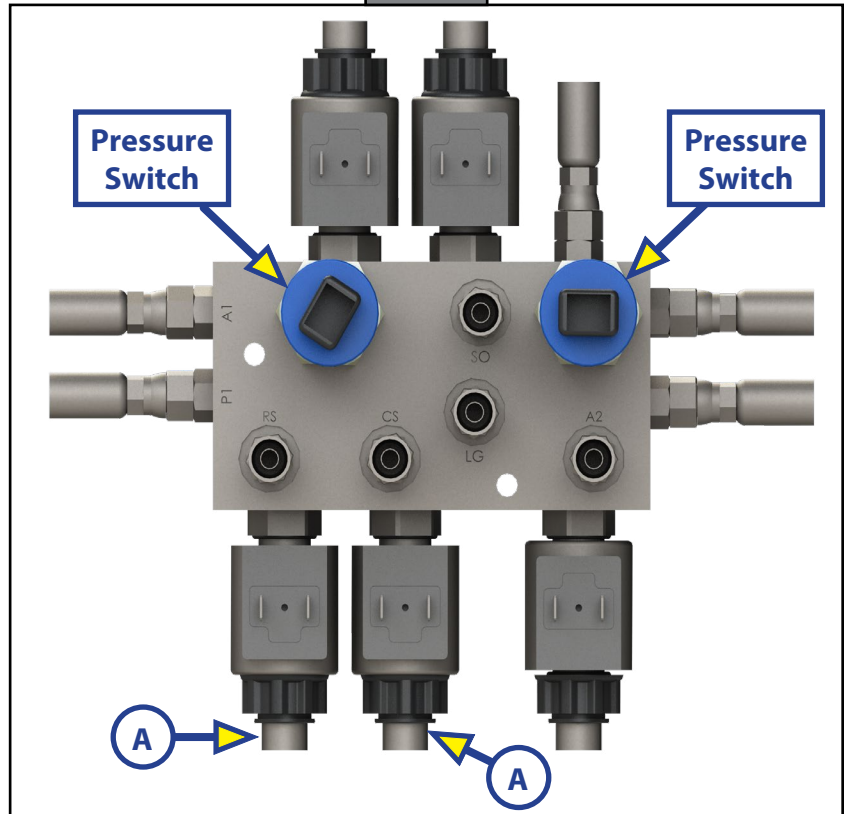


Fig. 23



C. Easy Approach - System valves A1 and A2 are located on the manifold (Fig. 24A).

2. Using a 5/32" hex wrench, open the desired valve(s) by turning the manual override set screw clockwise (Fig. 25A).

Fig. 24

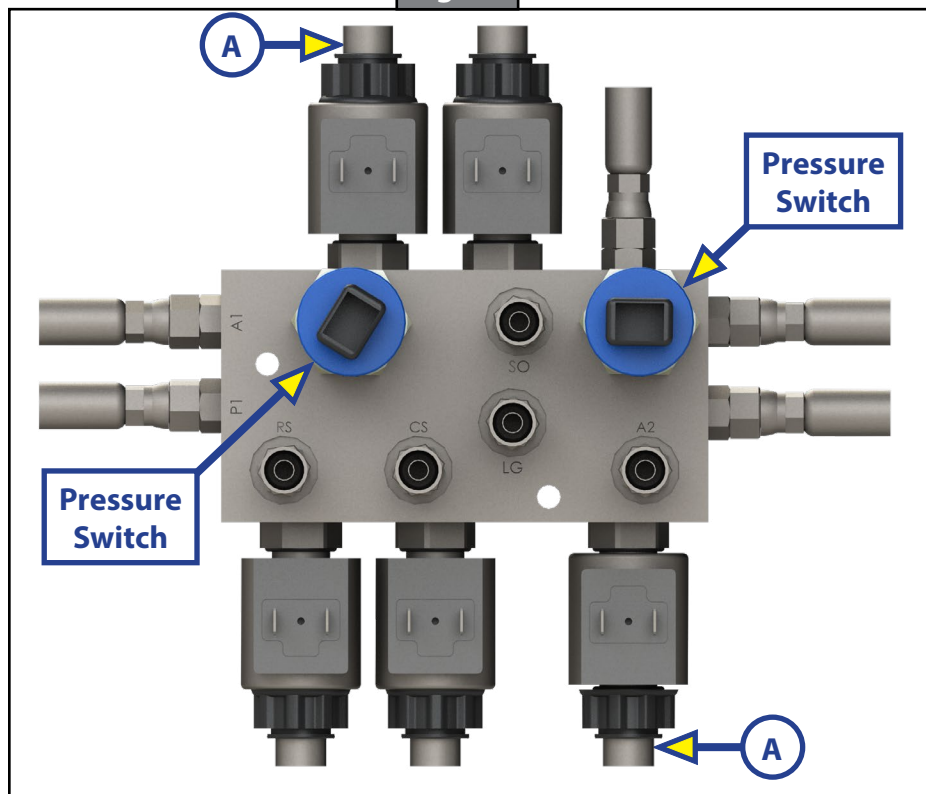
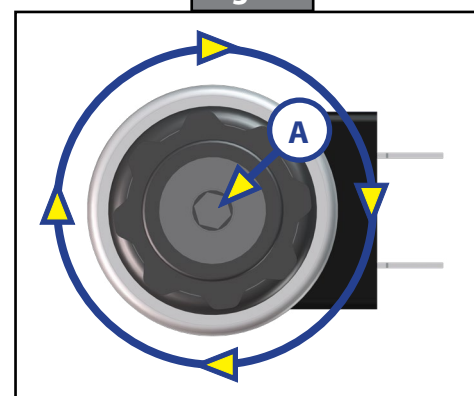
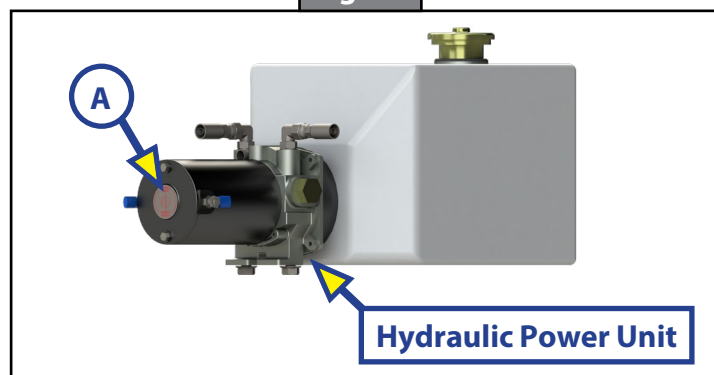


Fig. 25

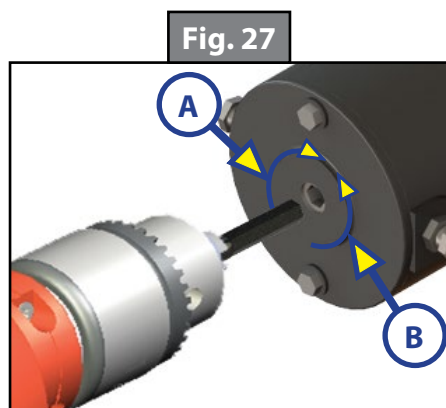


3. Remove the protective label (Fig. 26A) located on the front end of the hydraulic power unit to reveal the manual override coupler.

Fig. 26



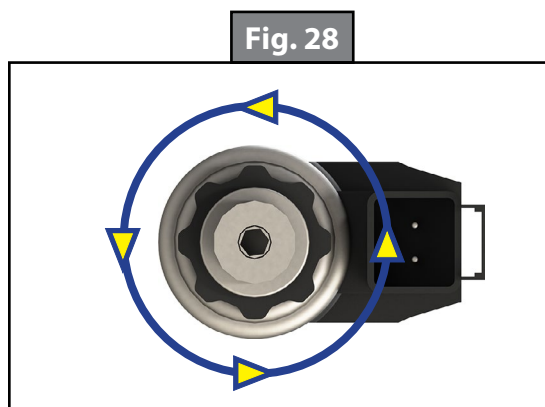
4. Using an electric drill with a 1/4" hex bit, insert the hex bit into the manual override coupler (Fig. 22) to manually operate the system.
 - A. For jacks:
 - I. Run the drill forward (clockwise) (Fig. 27A) to retract the jacks.
 - II. Run the drill in reverse (counterclockwise) (Fig. 27B) to extend the jacks.



⚠ CAUTION

Jacks need to be in the retracted position before attempting to extend/raise or retract/lower the Easy Approach system.

- B. For Easy Approach:
 - I. Run the drill forward (clockwise) (Fig. 27A) to retract/lower the trailer.
 - II. Run the drill in reverse (counterclockwise) (Fig. 27B) to extend/raise the trailer.
5. Make sure to turn the manual override set screw on the valve(s) back to the counterclockwise position (Fig. 28) after the manual override procedure is complete.



Notes

This image shows a full page of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page, typical of notebook or legal stationery. There are no margins, text, or other markings on the page.



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