X-RAMP™ HYDRAULIC LOWERING SYSTEM

OWNER'S MANUAL

LIPPERT COMPONENTS®

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Introduction

The lift and lower operation of the X-Ramp™ Hydraulic Lowering System, simplifies the lifting of the trailer's frame and body to an upper-most 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.

Additional information about this product can be obtained from lci1.com/support or by downloading the free myLCI app. The app is available on iTunes® for iPhone® and iPad® and also on Google Play™ for Android™ users.
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Safety Information

⚠WARNING

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

⚠WARNING

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

⚠CAUTION

Always wear eye protection when performing service or maintenance to the trailer. 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

- ¼ hex bit
- Spray lubricant
- Spray electrical contact cleaner
- Grease gun
- Torque wrench
- Tire pressure gauge

Operation

Extending the cylinders will lower the trailer bed for loading and unloading. Retracting the cylinders maximum length will raise the trailer bed ready for travel.
Make sure the trailer is parked on solid, level ground. Clear area under trailer of debris and obstructions. Locations should also be free of depressions. When parking the trailer on extremely soft surfaces, utilize load distribution pads under rear of the trailer.
The trailer should always be hooked to the tow vehicle when loading and unloading.

Electronic Operation

⚠ CAUTION

Never travel with the trailer unless the bed is fully elevated.

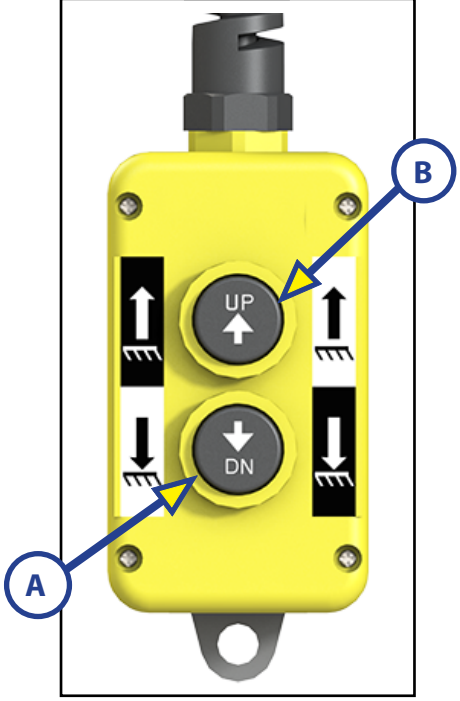
NOTE: Always maintain proper battery charge level.

1. Press the down (DN) button (Fig. 1A) on the pendant to raise the axles on the sub-frame, this will lower the trailer for loading and unloading.

NOTE: Always lower the trailer until the wheels of the sub-frame are completely off the ground.

2. Press the up (UP) button (Fig. 1B) on the pendant to lower the axles of the sub-frame chassis, which raises the trailer to the maximum height. Continue to hold the button 1-2 seconds after "full up" is achieved. Completing this action for 1-2 seconds after "full up" minimizes any linkage movement during transport and will extend linkage pin and cylinder life.

Fig. 1



Manual Override Procedure - Double Acting Hydraulic Power Unit

It is not recommended to manually extend/raise the trailer while it is loaded.

Retract

In the event of a dead battery, it is possible to operate the Low Entry Axle system manually.

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

1. Unthread the protective cap on top of the two-way retract cartridge valve, located on the hydraulic power unit (Fig. 2).
2. Turn the override knob counterclockwise until it stops.
3. Locate the manual override coupler on the front end of the power unit (Fig. 2).
4. Remove protective label (Fig. 3A) from the power unit, to reveal the manual override coupler.
5. Using a drill with a ¼" hex bit, run the drill counterclockwise (Fig. 4) to retract/lower the trailer.

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

6. After retracting the trailer, make sure to turn the override knob clockwise (Fig. 2) until it stops.
7. Thread on the protective cap until it is finger tight.

Extend

1. Unthread the protective cap on top of the four-way extend cartridge valve, located on the hydraulic power unit (Fig. 2).
2. Turn the override knob counterclockwise until it stops.
3. Locate the manual override coupler on the front end of the power unit (Fig. 2).
4. Remove protective label (Fig. 3A) from the power unit, to reveal the manual override coupler.
5. Using a drill with a ¼" hex bit, run the drill counterclockwise (Fig. 4) to extend/raise the trailer.
6. After extending the trailer, make sure to turn the override knob clockwise (Fig. 2) until it stops.
7. Thread on the protective cap until it is finger tight.

Fig. 2

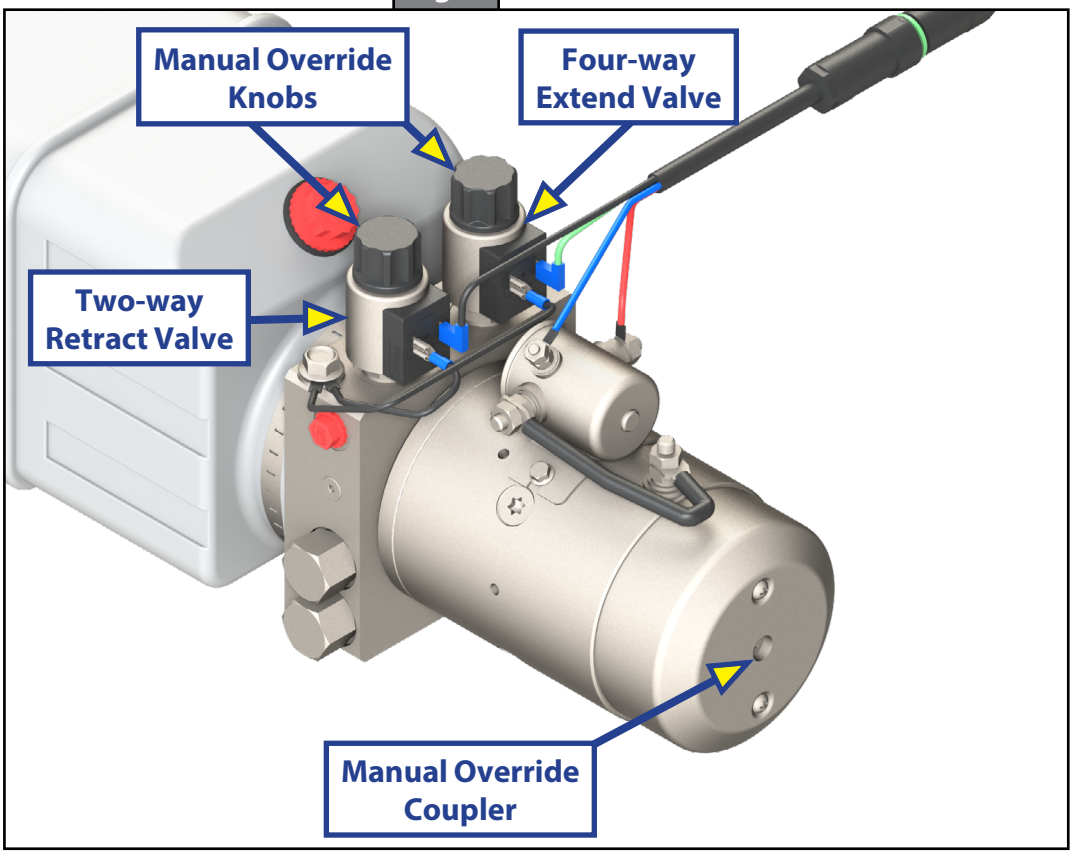


Fig. 3

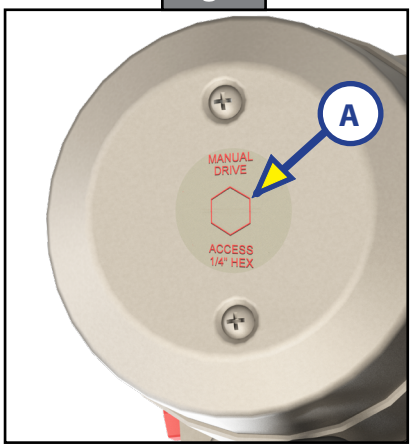
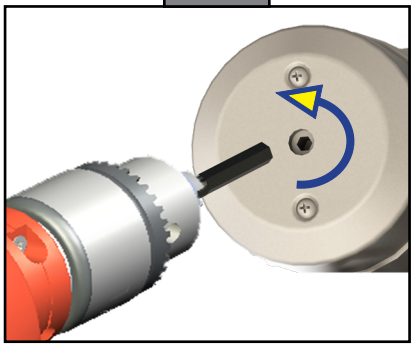
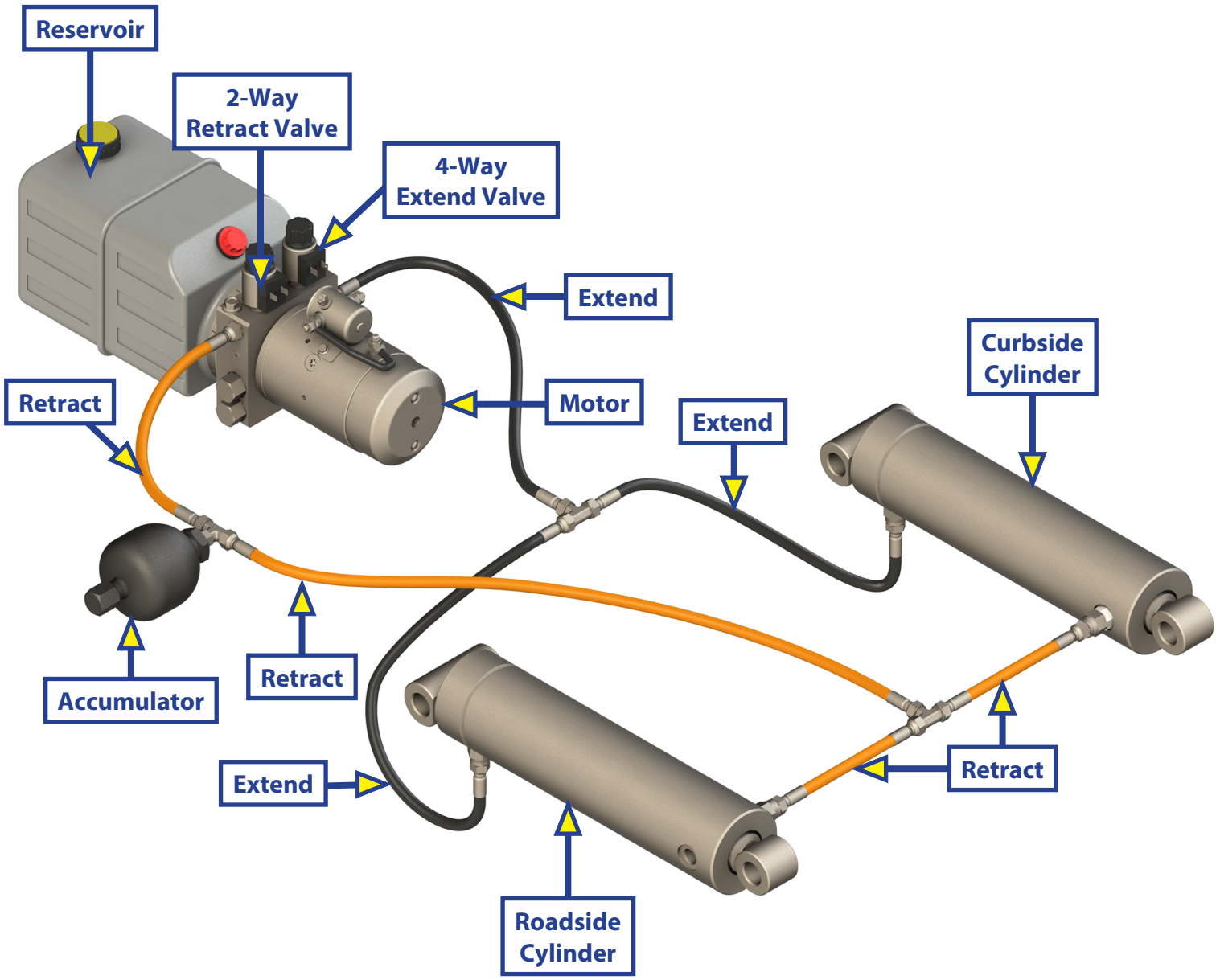


Fig. 4



Hydraulic Diagram



Maintenance

1. Check fluid reservoir every 12 months. If fluid is a clear red color, do not change. If fluid is milky, pink and murky and not clear red in color, drain reservoir and add new fluid. Hydraulic fluid in reservoir should be changed a minimum of every five years.

NOTE: Check the fluid only when all the cylinders are fully retracted.

NOTE: When checking the hydraulic fluid level, fill to within ¼" to ½" of fill spout.

2. Inspect and clean all power unit electrical connections every 12 months. If corrosion is evident, spray electrical connections with a small amount of lubricant to clean corrosion from contacts.
3. Contacts must be cleaned with a non-residue cleaner prior to use. LCI recommends use of an electrical contact cleaner spray.
4. Remove dirt and road debris from cylinders as needed.

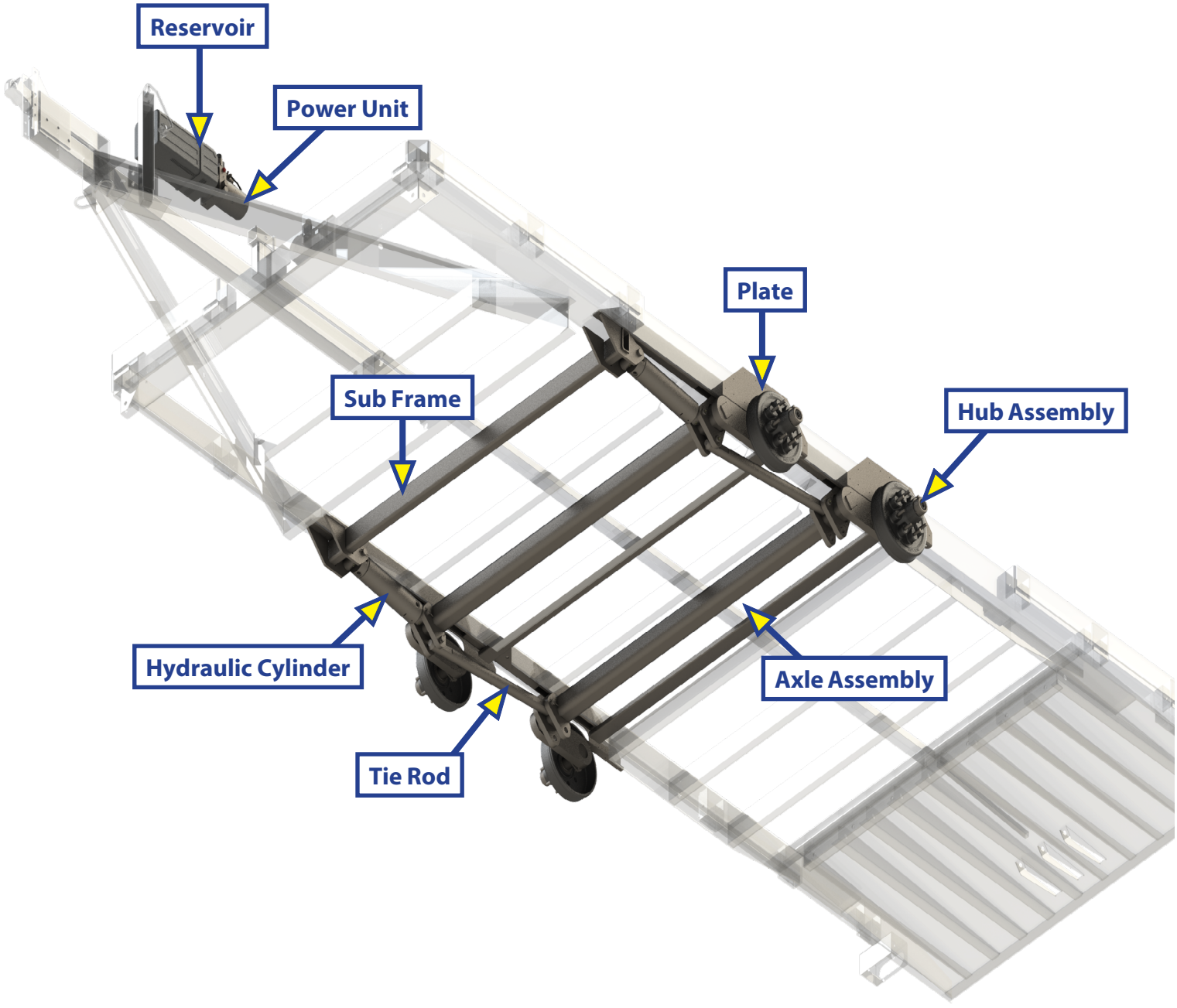
Fluid Recommendation

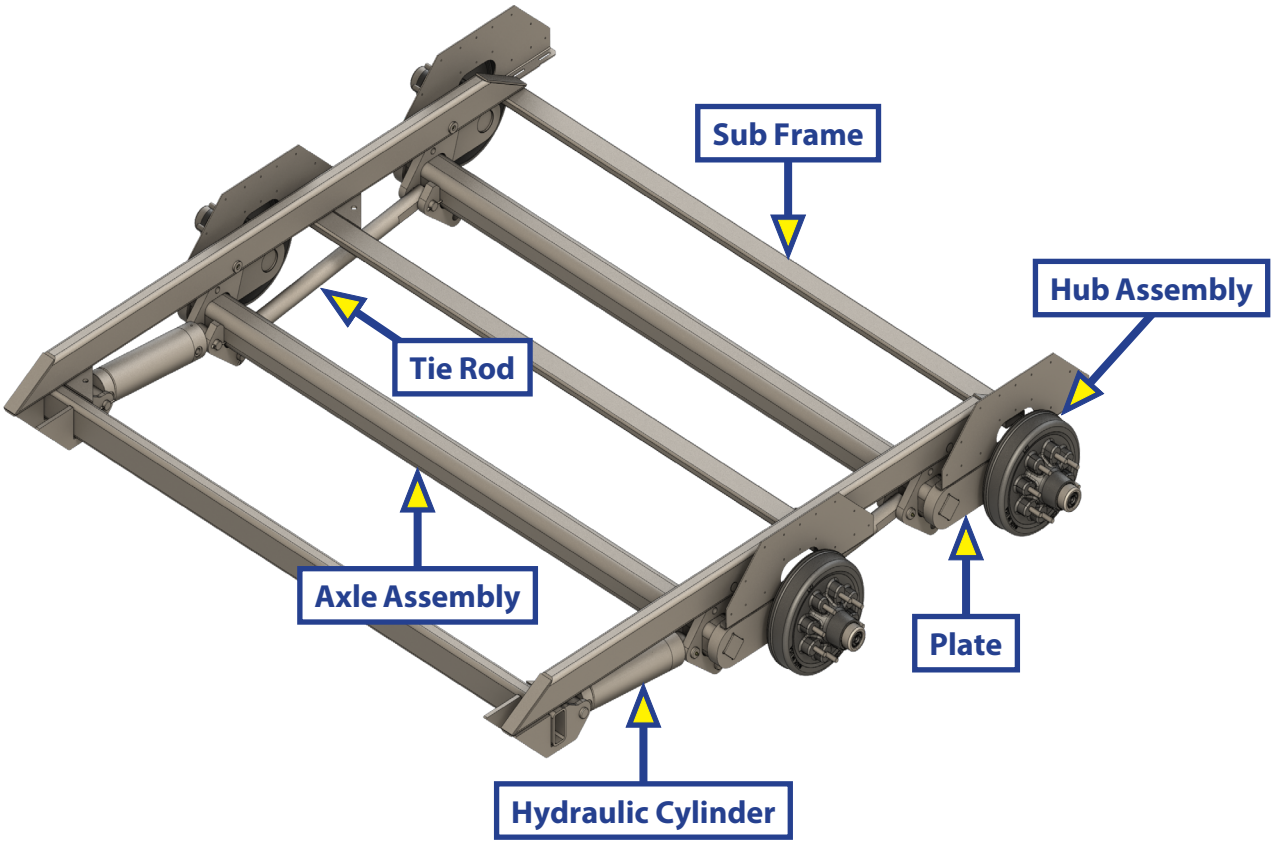
Automatic transmission fluid (ATF) with Dexron® III or Mercon® V or a blend of both is recommended by Lippert Components, Inc. For a list of approved fluid specifications, see TI - 188. To obtain this Technical Information sheet on-line, go to: https://www.lci1.com/support-low-entry-axle then click on the Technical Information Sheets button.

NOTE: In colder temperatures (less than 10° F) the cylinders may extend and retract slowly due to the fluid's molecular nature. For cold weather operation, fluid specially formulated for low temperatures may be desirable.

X-RAMP™ HYDRAULIC LOWERING SYSTEM ASSEMBLY

NOTE: View is from underneath the frame and the frame has been made transparent for ease of viewing.



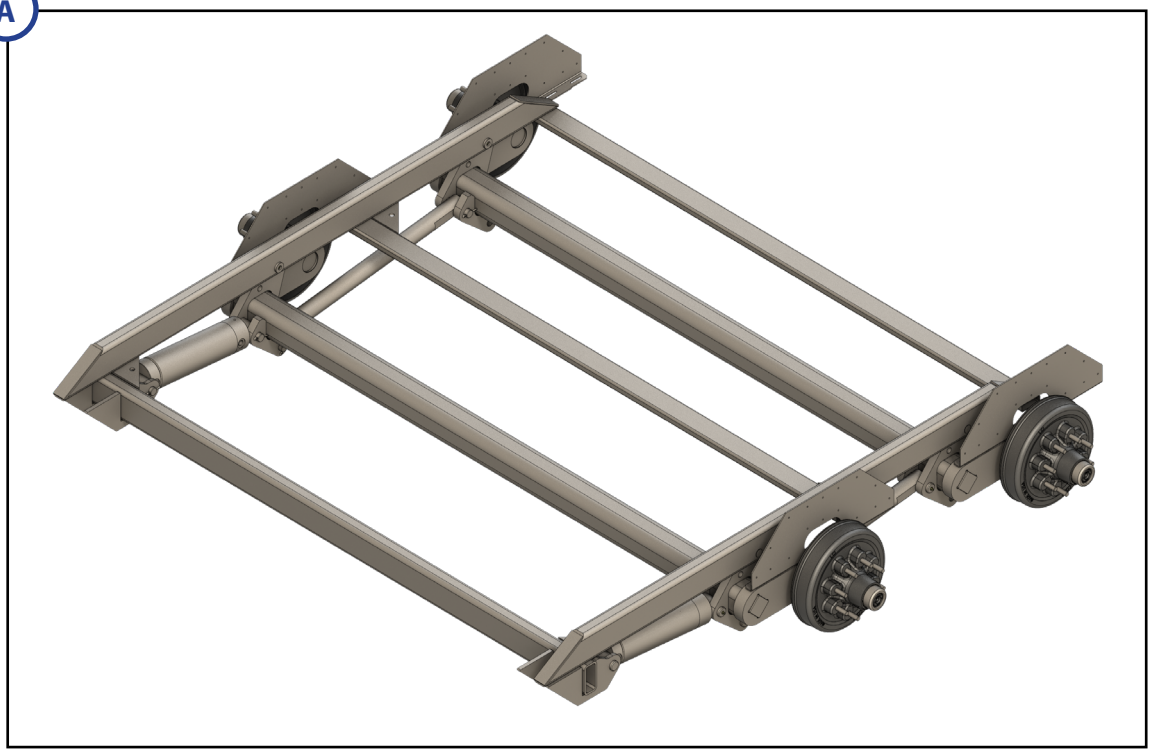

Sub Frame
Hub Assembly
Tie Rod
Axle Assembly
Plate
Hydraulic Cylinder

X-RAMP™ HYDRAULIC LOWERING SYSTEM COMPONENTS

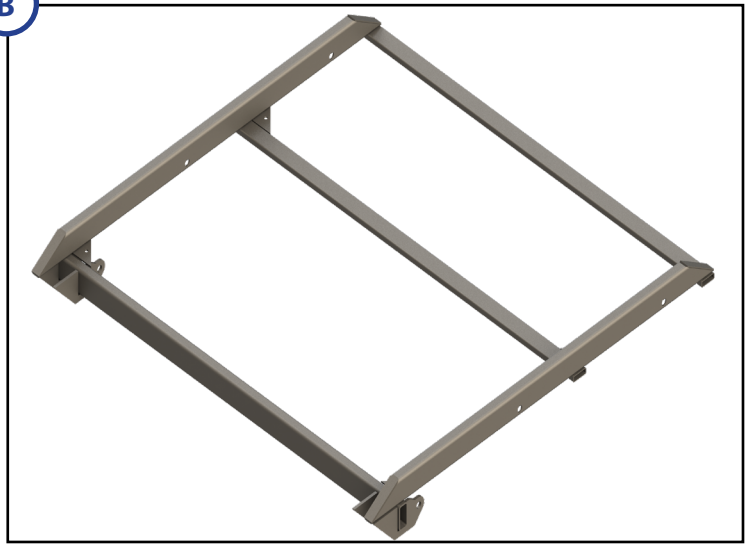
AXLES AND SUSPENSION

NOTE: Part numbers are shown for identification purposes only. Not all parts are available for individual sale. All parts with a link to the Lippert Store can be purchased.

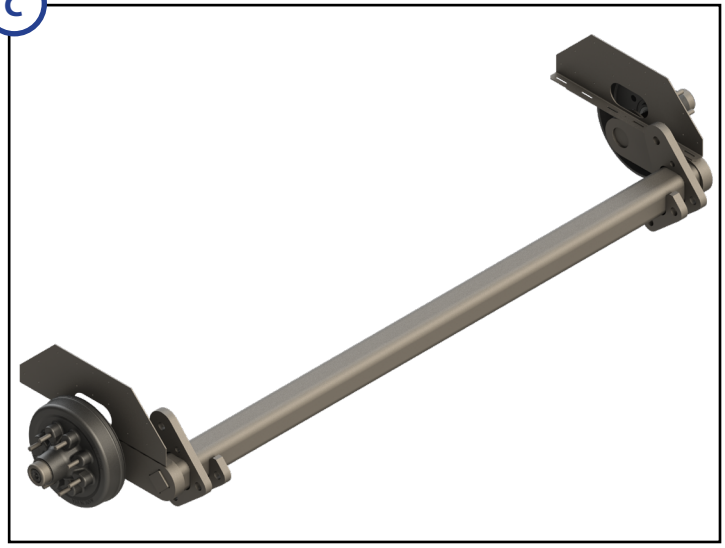
A



B

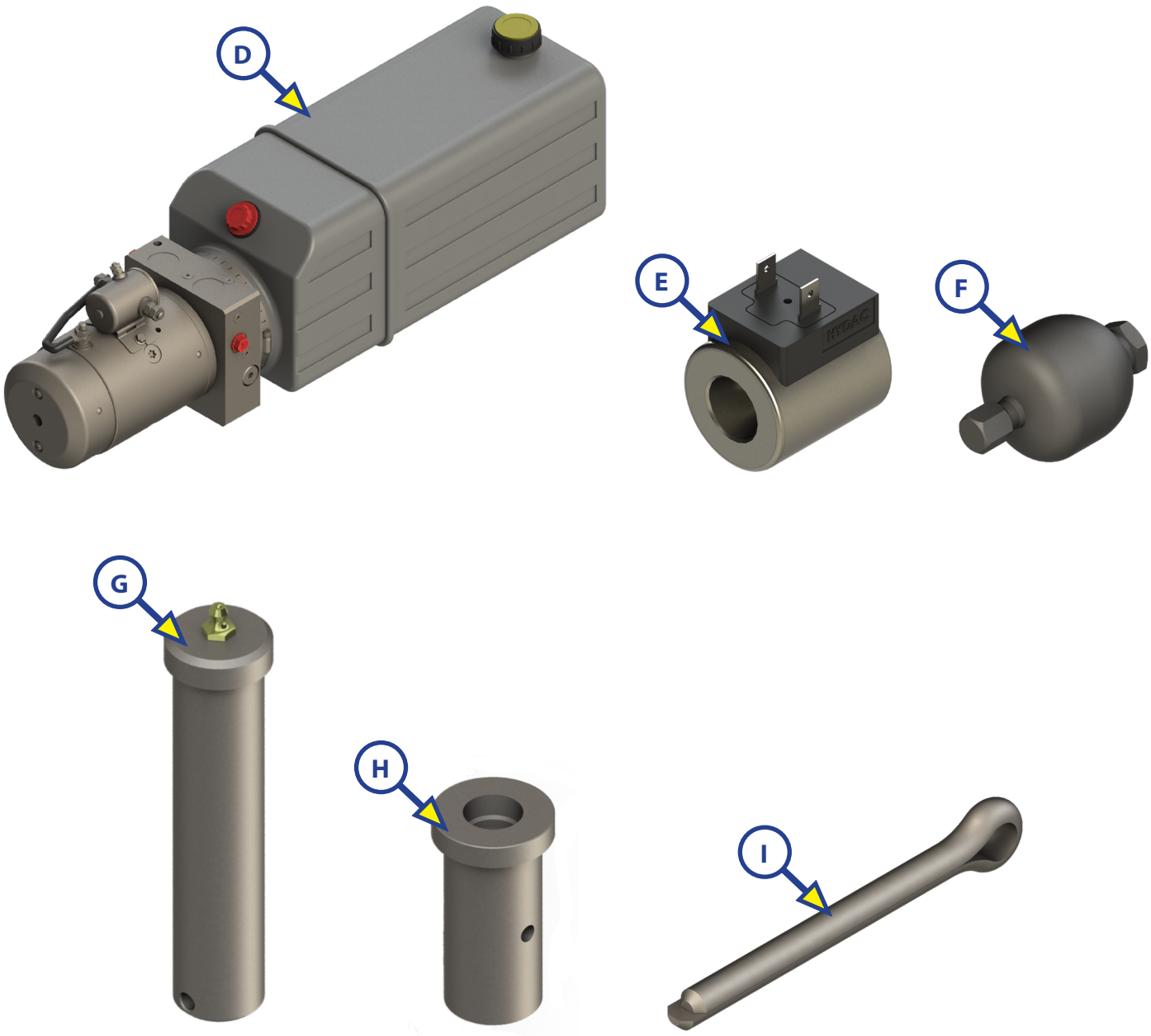


C



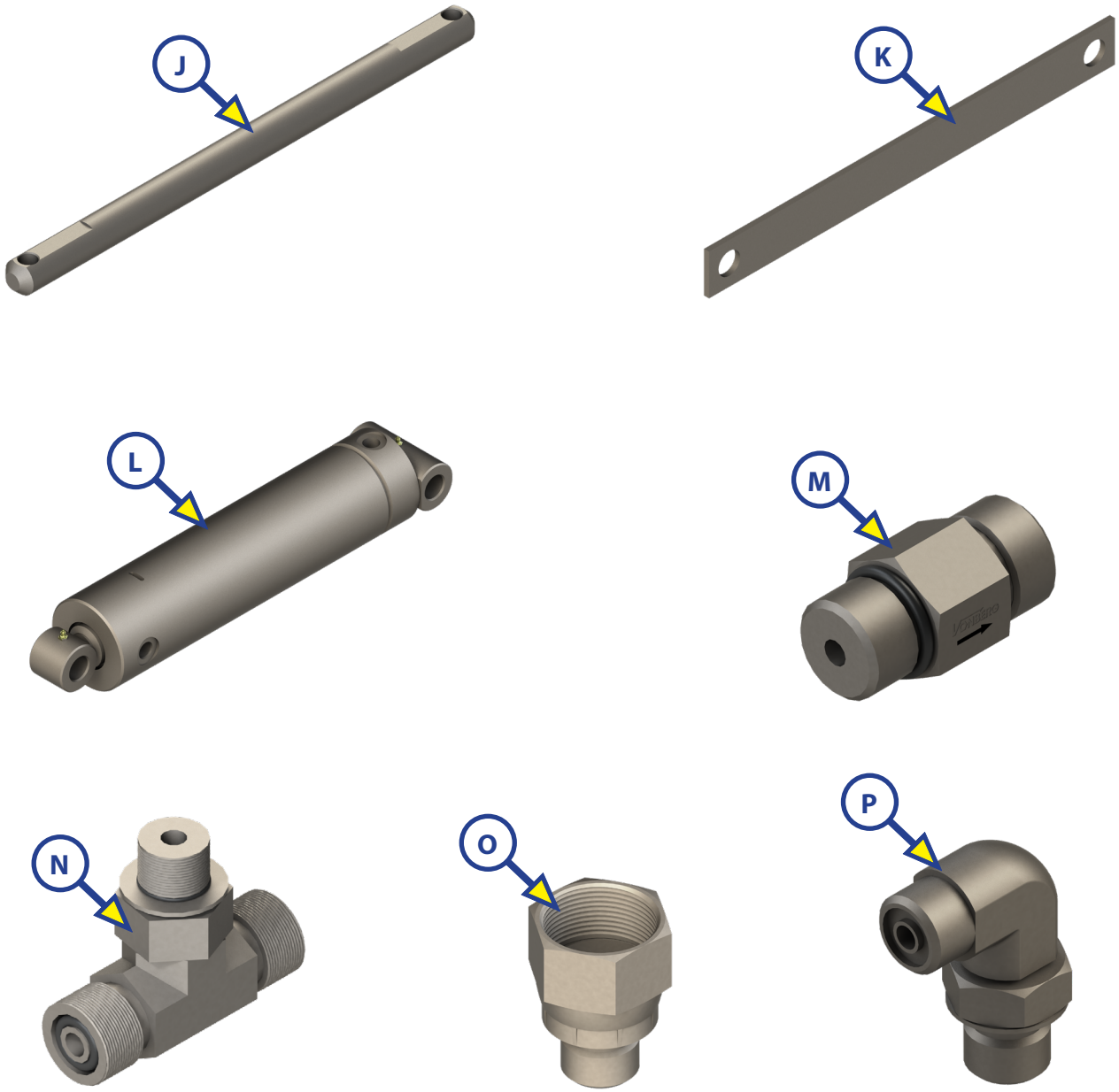
Callout	Part #	Description
A	696025	Axle Module - 14K - 88.00L x 79.88 OD Frame
B	696026	Sub-Frame
C	696027	Axle Assembly

AXLES AND SUPPLY

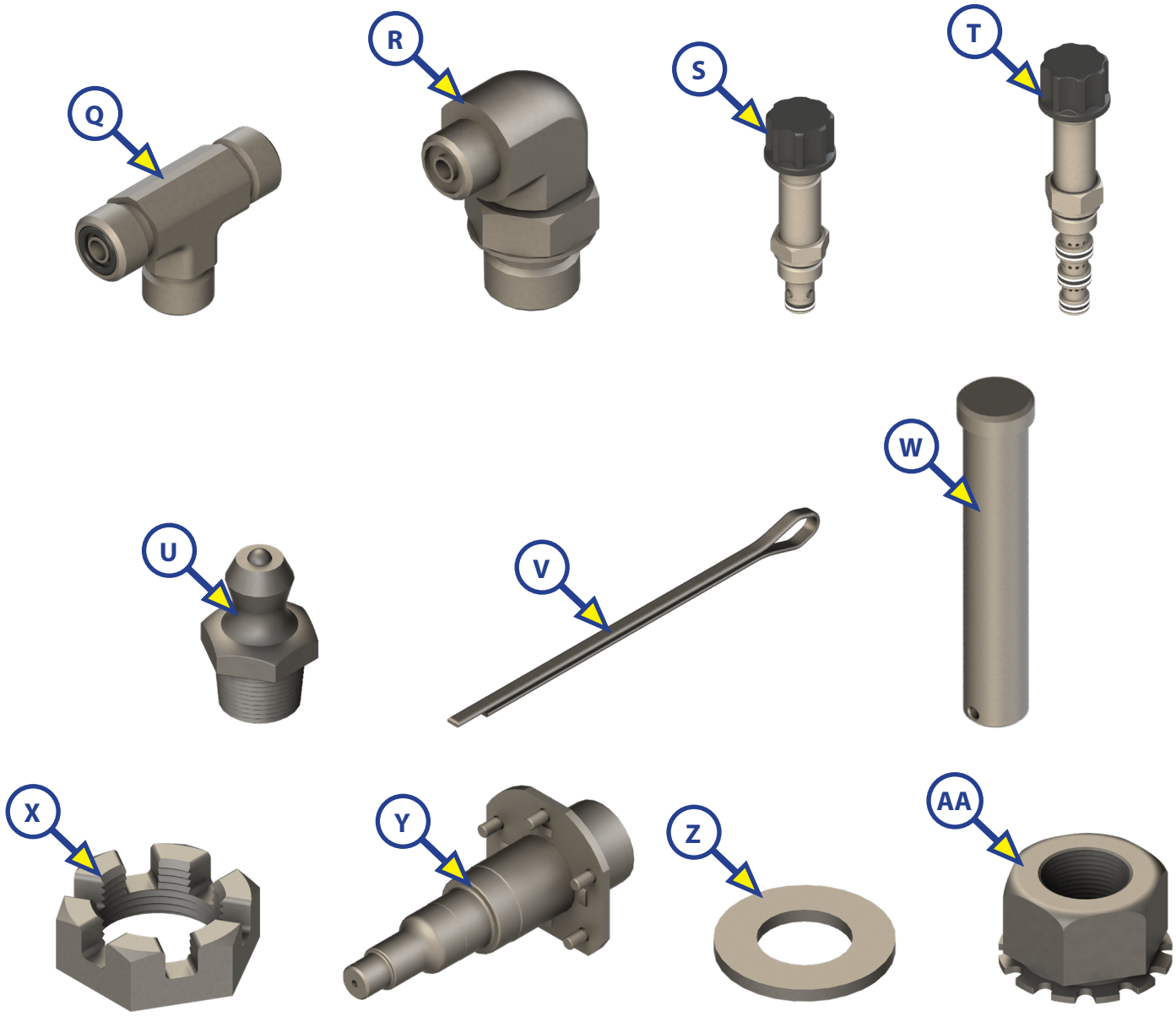


Callout	Part #	Description
D	701146	Pump Hydraulic Power Unit
E	176954	12 Volt Spade Style Coil
F	718921	Hydraulic Accumulator
G	720699	Clevis Pin - 1.00" x 4.20" Zn w/Zerk
H	688436	Grease Pin - 1.00" x 2.035"
I	699462	Cotter Pin - 3/16" x 1.75" Zn

AXLES AND SUSPENSION

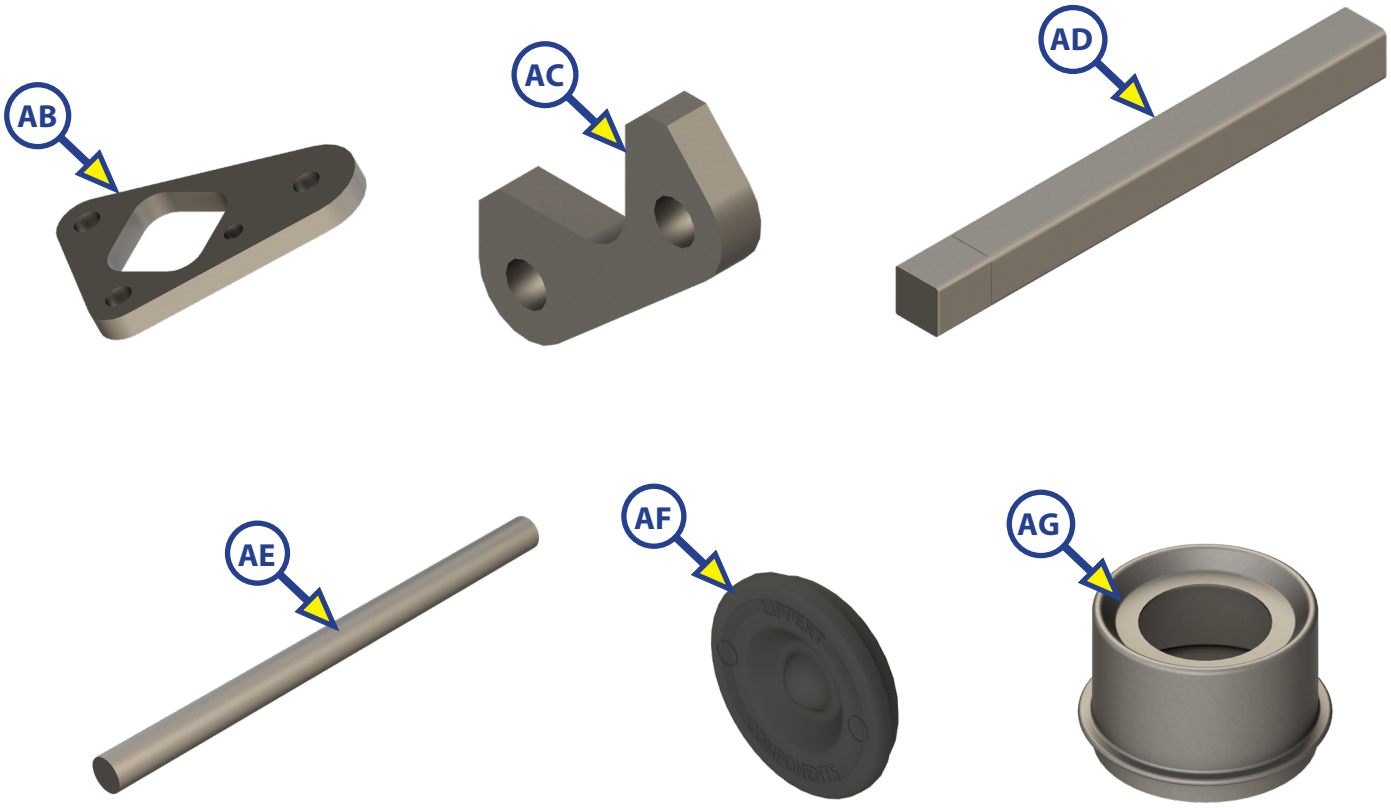


Callout	Part #	Description
J	688437	Rod 32.44" x 2.00" - Tie Rod - Zn
K	703031	Plate 20.00" x 2.00"
L	718758	Hydraulic Cylinder, 3.5" bore
M	718922	Velocity Fuse, 3.5" GPM
N	143108	¼" Hydraulic Fitting - Branch Tee
O	718923	Hydfit ORFS 08 Female to ORFS - 04 Male Straight
P	718924	SAE - 6 Male to ORFS - 4 Male - 90



Callout	Part #	Description
Q	718996	Hydfit ORFS - 04 Male Run ORFS - 04 Male Branch Tee
R	718997	Hydfit SAE - 08 Male to ORFS - 04 Male 90 Degree
S	701163	Hydfit Hydac 2P/2W Cartridge Valve
T	701164	Hydfit Hydac 2P/4W Cartridge Valve
U	122255	Grease Zerk - .25" - 28" x .578", Zn
V	122075	Cotter Pin - 1.75"
W	691092	Clevis Pin, 1.00" x 5.20", Zn
X	122081	Castle Nut - 1"-14
Y	132923	Spindle Assembly - Str-Flg-Lube - 11 & 12 - 7K
Z	179660	Washer, 1 1/16" x 2" SAE Flat, Hardened Plain
AA	122077	Self-Locking Nut; 3/8" - 24

AXLES AND SUSPENSION



Callout	Part #	Description
AB	690851	Plate, 8 7/8" x 11 5/8"
AC	690852	Plate, 6 7/16" x 6 1/8"
AD	384119	Inner Bar, 2 1/4" x 2 1/4" x 23.13"
AE	673221	Rubber Cord, 13-19.38" x 1.25" dia. - 80 Durometer
AF	122065	Universal Rubber Plug (w/ LCI Logo)
AG	127300	Dust Cap (7-8k lbs.)

LIPPERT COMPONENTS®

Please recycle all obsolete materials.

For all concerns or questions, please contact
Lippert Components, Inc.
Ph: (574) 537-8900 | Web: lci1.com | Email: customerservice@lci1.com

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