

AXLES AND SUSPENSION

Anatomy of a Torsion Axle Identification Label

The diagram shows a Lippert Torsion Axle Identification Label with the following fields and callouts:

- A**: Item# 2029114329
- B**: LC160-DTBSA-82-68-ID-10D-LPIB-SM-L-65516-PW-HDSUSP
- C**: Capacity: 6,000 lbs
- D**: MFG. Date: 05/28/21
- E**: RPO-009420476
- F**: QAI logo

Other fields on the label include: 866 - 524 - 7821, www.lci1.com, Cust Part#, Cust PO#, Serial #: S096910263, CAN-D313-385, REC625-1 REC598, SLR as tested 13.25" AMP - 6.0 Axle Electrical Ratings: 12v, and Goshen, IN.

Callout	Name	Description
A	Part Number or Variant Number	This is the part number or Variant number used to order the axle. Part numbers are traditionally considered to be standard options without deviation from a set of metrics specific to the axle's application, and Variant numbers are configured to more custom applications.
B	Axle Description	A code made up of several shorthand codes or "designations" that detail everything about the axle.
C	Axle Capacity	Calculated using the lowest rated component on the axle assembly produced by Lippert. Axle capacity excludes tire and wheel ratings. The vehicle manufacturer will determine final GAWR (gross axle weight rating) and print that info on the VIN label.
D	Date of Manufacture	The date the axle was made in the factory.
E	RPO Number	The production number for the run of axles to which this particular axle belongs.
F	CSA/QAI Approved	If axle is CSA/QAI certified, then a QAI logo will appear on the upper right corner of the label.

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Purpose

This document outlines the nomenclature used to create torsion axle descriptions that are applied to torsion axle identification labels.

Nomenclature

Model Options

NOTE: CURT models also available. CURT models are designated as CURTXXX in place of LCIXXX. In the example axle tag and description, if it were a CURT model the model designation would be CURT52.

LCI60-DTBSA-82-68-ID-10D-LPIB-SM-L-65516-PW-HDSUSP

**Model
Designation**

Model Designation Options	Capacity	Standard Electric Brake
LCI20	1,000 - 2,000 lbs	7" x 1.5" brake
LCI35	2,500 - 3,500 lbs	10" x 2.25" brake
LCI35H	4,000 - 4,400 lbs	10" x 2.25" HD brake
LCI52	4,000 - 5,200 lbs	12" x 2" brake
LCI60	6,000 lbs	12" x 2" brake
LCI70	7,000 lbs	12" x 2" brake
LCI80H	8,000 lbs	12" x 2" brake
LCI80	8,000 lbs	12.25" x 3.38" brake
LCI100	10,000 lbs	12.25" x 3.38" brake
LCI100S	10,000 lbs (short)	12.25" x 3.38" brake
LCI120	12,000 lbs	12.25" x 5.00" brake

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Axle Design and Torsion Brake Designation

This portion of the identifier description is a two to seven letter code that consists of two parts. The first part of this code is the presence or absence of the letter "D." If this code begins with a "D," this denotes the axle design as being diamond tube orientation. If there is no "D," the axle will feature a square tube orientation. The remaining letters in the code will correspond to the torsion brake options. In the below example "DTBSA" is used. The first letter is "D," denoting a diamond tube orientation. If the code was simply "TBSA," the axle would feature a square tube orientation with a classic design.

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**Axle Design and
Torsion Brake
Designation**

Axle Design Options	Description
D	Diamond tube orientation, Lippert design. 2-7k capacity option only
(No "D")	Square tube orientation with a classic design
Torsion Brake Options	Description
TIL	Torsion Idler hub, Long spindle (2K idler designation only)
TIS	Torsion Idler hub, Short spindle (2K idler designation only)
TI	Torsion idler, 3.5K and up
TB	Torsion Brake, electric drum brake
TBSA	Torsion Brake, electric drum brake, self-adjust
TBSALL	Torsion Brake, electric drum brake, self-adjust with 33" lead wires
TBWP	Torsion, electric w/park feature drum brake
THUS	Torsion, hydraulic uni-servo drum brake
THDS	Torsion, hydraulic duo-servo drum brake
THUSFB	Torsion, hydraulic uni-servo free-backing drum brake
TD	Torsion Brake, hydraulic disc brake

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Hub Face Dimension, or Track Dimension

The Hub face dimension is a customer specified value. It is the distance between the wheel mounting surfaces of the hubs. This dimension is more commonly referred to as "hub face to hub face." Track dimension is the distance from center of tire to center of tire on the mobile home unit's tires on the same axle.

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Hub Face
Information

Bracket Spacing Dimension

The bracket spacing dimension is a customer specified dimension. Each dimension has a set value of bracket overhang limitations specified by Lippert Engineering. For more information on the parameters of these values, contact the Lippert Care Center.

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Bracket Spacing
Dimension

Bracket Spacing Measurement Location

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Bracket Spacing
Measurement Location

Bracket Spacing Measurement Location Options	Description
ID	Bracket spacing is measured from inside of bracket one to inside of other.
OD	Bracket spacing is measured from outside of bracket one to outside of other.
NOBRKT	Axle brackets not provided.

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Torsion Swing Arm Angle

The torsion swing arm angle is referenced from a horizontal (zero) start angle position. Up angles are denoted by a "U" following the numeric angle measurement, and lower the frame height. Down angles are denoted by a "D" following the numeric angle measurement, and increase the frame height.

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**Torsion Swing
Arm Angle**

Torsion Brake Options	Description
22U	22.5° UP start angle
10U	10° UP start angle
ZERO	0° start angle
10D	10° DOWN start angle
22D	22.5° DOWN start angle
32D	32° DOWN start angle
45D	45° DOWN start angle

Bracket Style and Orientation

The first two to five letters/digits of this code correlate to the style of brackets on the axle, while the last two letters denote the orientation of those brackets.

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**Bracket Style
and Orientation**

Bracket Style Options	Description
LP	Low profile. The top of this bracket rests on top of the axle tube.
HP	High profile. The top of this bracket is 1" above the axle tube.
3HP	3" high profile. The top of this bracket is 3" above the axle tube.
QFLEX	QFLEX bracket. Matches a Hayes Axle style bracket.
Bracket Orientation Options	Description
IB	Inboard. The long leg (mounting leg) of the bracket is mounted inside of the axle.
OB	Outboard. The long leg (mounting leg) of the bracket is mounted outside of the axle.
Special Bracket Options	Description
SPBRKT	Special brackets required.

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Side Bracket Style

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Side Bracket
Style

Side Bracket Options	Description
SM	Bolt-on side mount brackets.
HSM	1/4 gage heavy-duty side mounts for diamond tube torsions.
ASM	Pre-installed Aluminum side mount brackets. 2-7k capacity for diamond tubes, 2-8k capacity for square tubes.
7SM	7k side mount brackets.
(blank)	No side mount brackets.

Lubrication Designation

LCI60-DTBSA-82-68-ID-10D-LPIB-SM-L-65516-PW-HDSUSP

Lubrication
Designation

Lubrication Designation Options	Description
L	Super-lube. Grease zerk in end of spindle.
G	Standard grease.
O	Oil lubrication. Only available on 8k, 10k, 12k, and 8k hybrid axles.

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Hub or Hub/Drum Designation

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Hub/Drum
Designation

Hub/Drum Designation Options	Description	Hub Options
440	4 wheel bolts on a 4.00" circle with 1/2-20 stud.	Idler
545/5.5	5 wheel bolts on a 4.50" circle with 1/2-20 stud. 5.50" hub face diameter. For 10" and less wheels only.	Idler
545/6.5	5 wheel bolts on a 4.50" circle with 1/2-20 stud. 6.50" hub face diameter. For 12" and larger wheels only.	Idler
545/7	5 wheel bolts on a 4.50" circle with 1/2-20 stud.	7" X 1.25" brake
545	5 wheel bolts on a 4.50" circle with 1/2-20 stud.	10" X 2.25" brake, disc brake, or idler
C545	5 wheel bolts on a 4.50" circle with 1/2-20 stud. Curt hub.	10" X 2.25" brake
5475	5 wheel bolts on a 4.75" circle with 1/2-20 stud.	10" X 2.25" brake, or idler
550	5 wheel bolts on a 5.00" circle with 1/2-20 stud.	10" X 2.25" brake, or idler
555	5 wheel bolts on a 5.50" circle with 1/2-20 stud.	10" X 2.25" brake, or idler
655	6 wheel bolts on a 5.50" circle with 1/2-20 stud.	10" X 2.25" brake, disc brake, or idler
C655	6 wheel bolts on a 5.50" circle with 1/2-20 stud. Curt hub.	10" X 2.25" brake
65517	6 wheel bolts on a 5.50" circle with 1/2-20 stud.	12" X 2" brake, disc brake, or idler
C65517	6 wheel bolts on a 5.50" circle with 1/2-20 stud. Curt hub.	12" X 2" brake
660	6 wheel bolts on a 6.00" circle with 9/16-18 stud. AG hub.	Idler
608B	8 wheel bolts on a 8.00" circle with 5/8-18 stud. AG hub.	Idler
86517	8 wheel bolts on a 6.50" circle with 1/2-20 stud.	12" X 2" brake, disc brake, or idler
C86517	8 wheel bolts on a 6.50" circle with 1/2-20 stud. Curt hub.	12" X 2" brake
86537	8 wheel bolts on a 6.50" circle with 9/16-18 stud.	12" X 2" brake, disc brake, or idler
86557	8 wheel bolts on a 6.50" circle with 5/8-18 stud.	12" X 2" brake
865H-9/16	8 wheel bolts on a 6.50" circle with 9/16-18 stud.	12" X 2" brake, disc brake, or idler

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Hub or Hub/Drum Designation Table Continued

Hub/Drum Designation Options	Description	Hub Options
C865H-9/16	8 wheel bolts on a 6.50" circle with 9/16-18 stud. Curt hub.	12" X 2" brake
865H-5/8	8 wheel bolts on a 6.50" circle with 5/8-18 stud.	12" X 2" brake, disc brake, or idler
C865H-5/8	8 wheel bolts on a 6.50" circle with 5/8-18 stud. Curt hub.	12" X 2" brake
86580-9/16	8 wheel bolts on a 6.50" circle with 9/16-18 stud.	12.25" X 3.38" brake, disc brake, or idler
C86580-9/16	8 wheel bolts on a 6.50" circle with 9/16-18 stud. Curt hub.	12.25" X 3.38" brake
86580-5/8	8 wheel bolts on a 6.50" circle with 5/8-18 stud.	12.25" X 3.38" brake, disc brake, or idler
C86580-5/8	8 wheel bolts on a 6.50" circle with 5/8-18 stud. Curt hub.	12.25" X 3.38" brake
865	8 wheel bolts on a 6.50" circle with 5/8-18 stud.	12.25" X 3.38" brake (10K axle), 12.25" X 5" brake (12K axle), or disc brake

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Wiring Designation

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Wiring
Designation

Bracket Style Options	Description
(blank)	No pre-wiring. Brake lead wires left loose.
18PT	18" pigtails added to brake lead wires on each side.
18BULPT	18" pigtail (green and white wires) wired on LH/road side of axle. 18 male bullet.
SPT	Weather pack pigtail added to each brake. Axle not wired from right to left.
30PT	30" pigtails added to brake lead wires on each side.
30PT-SL	30" wire leads with split loom.
18GNPT	18" pigtails using 16 gauge green leads.
PW	Pre-wiring. Right hand brake wired to left hand with 30" pigtail or lead wire. Requires angle iron welded to axle tube, and a split line conduit.
PW-SPT	Pre-wiring with weather pack pigtail instead of lead wires.
RW-30PT	Reverse pre-wired with 30" lead wires.
CC	Conduit connector installed onto brake. Brake lead wires are left loose.

Additional Descriptors

LCI60-DTBSA-82-68-ID-10D-LPIB-SM-L-65516-PW-HDSUSP

Additional Descriptors

Additional Descriptors	Description
NO PWDR	No power coat applied to axle.
SLVR	Silver powder coat applied to axle.
NO CAMBER	No camber of axle beam.
HDSUSP	Heavy-duty suspension for triple 8k axle configurations. This option uses a 10k inner bar and rubber length in an 8k beam assembly. Only available on model LCI80.



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