

## TJI® Joists Header-Off Span Table

For certain situations, a typical repair detail may not be sufficient or there may not be enough room to install the required repair materials. In such cases, the most common method of repairing the damaged TJI® joist is to install a header on either side of the damaged region and attach the header(s) to the adjacent, undamaged TJI® joists. This repair technique is typically referred to as **Header-Off** or **Headered-Off**.

Tables 1 gives the maximum allowable clear spans for both the damaged TJI® joist and the adjacent, undamaged TJI® joists. **Detail H2A** provides supplementary information regarding the installation of a Header-Off repair.

**TABLE 1: TJI® JOIST HEADER-OFF CANADA<sup>[1][2]</sup>**

Joist Depth	TJI® Series	Maximum Allowable Clear Span							
		40 PSF Live Load / 15 PSF Dead Load				40 PSF Live Load / 30 PSF Dead Load			
		12" o.c.	16" o.c.	19.2" o.c.	24" o.c.	12" o.c.	16" o.c.	19.2" o.c.	24" o.c.
9½"	110	14'-8"	13'-4"	12'-7"	10'-2"	14'-8"	12'-5"	10'-4"	8'-3"
	210	15'-4"	14'-0"	13'-2"	11'-4"	15'-4"	13'-9"	11'-5"	9'-1"
	230	15'-10"	14'-5"	13'-7"	12'-7"	15'-10"	14'-5"	12'-10"	10'-3"
	360	16'-8"	15'-2"	14'-3"	13'-0"	16'-8"	15'-2"	13'-2"	10'-6"
	560	18'-11"	17'-2"	16'-2"	15'-0"	18'-11"	17'-2"	16'-1"	12'-10"
11⅞"	110	17'-5"	15'-4"	12'-9"	10'-2"	16'-7"	12'-5"	10'-4"	8'-3"
	210	18'-3"	16'-8"	14'-2"	11'-4"	18'-3"	13'-9"	11'-5"	9'-1"
	230	18'-9"	17'-1"	15'-11"	12'-9"	18'-9"	15'-5"	12'-10"	10'-3"
	360	19'-10"	18'-0"	16'-4"	13'-0"	19'-10"	15'-10"	13'-2"	10'-6"
	560	22'-3"	20'-6"	19'-3"	15'-11"	22'-3"	19'-3"	16'-1"	12'-10"
14"	110	19'-9"	15'-4"	12'-9"	10'-2"	16'-7"	12'-5"	10'-4"	8'-3"
	210	20'-9"	17'-1"	14'-2"	11'-4"	18'-4"	13'-9"	11'-5"	9'-1"
	230	21'-4"	19'-2"	15'-11"	12'-9"	20'-8"	15'-5"	12'-10"	10'-3"
	360	22'-6"	19'-7"	16'-4"	13'-0"	21'-1"	15'-10"	13'-2"	10'-6"
	560	24'-9"	22'-11"	19'-11"	15'-11"	24'-9"	19'-3"	16'-1"	12'-10"
16"	210	22'-9"	17'-1"	14'-2"	11'-4"	18'-4"	13'-9"	11'-5"	9'-1"
	230	23'-7"	19'-2"	15'-11"	12'-9"	20'-8"	15'-5"	12'-10"	10'-3"
	360	24'-7"	19'-7"	16'-4"	13'-0"	21'-1"	15'-10"	13'-2"	10'-6"
	560	26'-11"	23'-11"	19'-11"	15'-11"	25'-9"	19'-3"	16'-1"	12'-10"

[1] See General Notes (Page 2).

[2] See **Detail H2A** (Page 3).

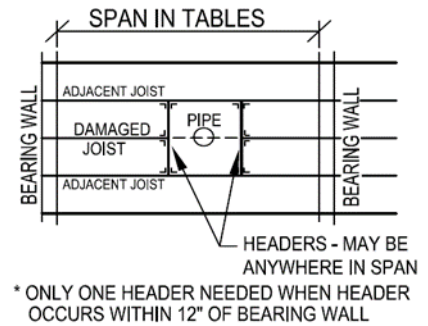
**Span values have not been evaluated for the effects of differential deflection and possible impacts on floor finishes. For a more detailed analysis, please contact your Weyerhaeuser representative.**

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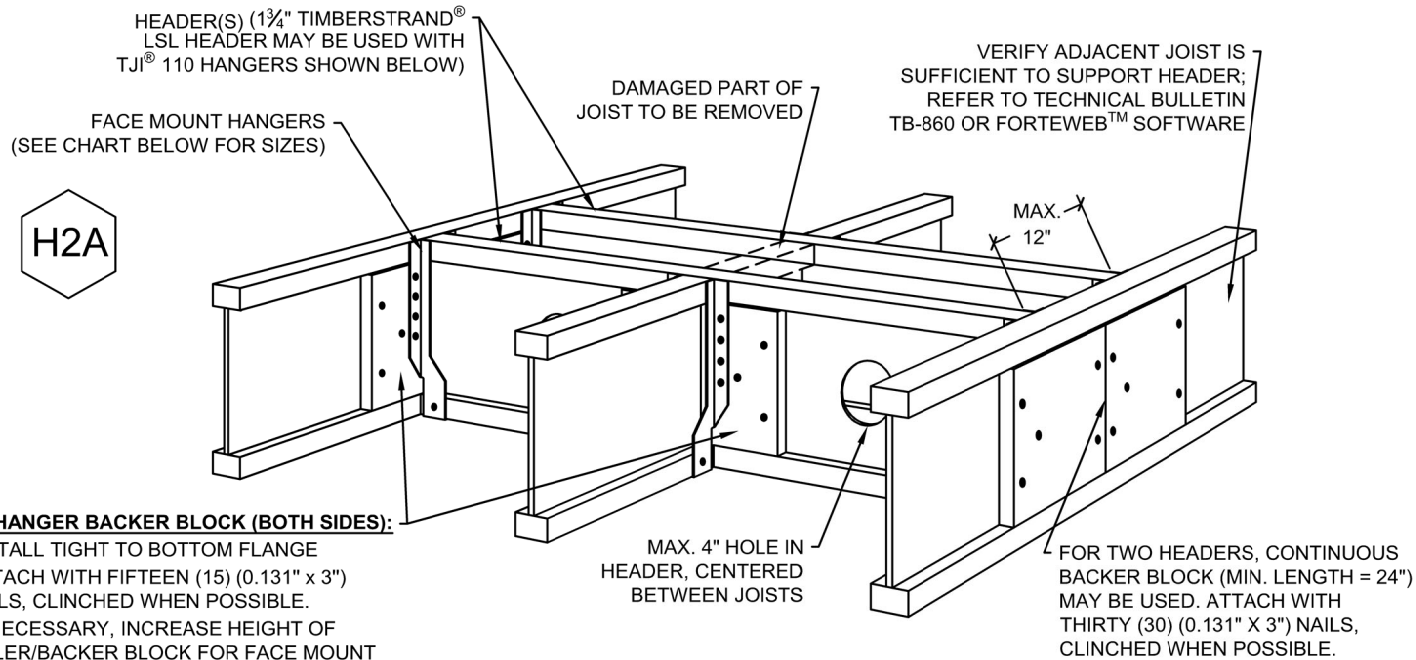
### General Notes

- Table is based on:
  - Limit States Design, per CSA 086.
  - Uniform loads.
  - Live load deflection criteria of  $L/480$ .
  - More restrictive of simple or continuous span.
  - Clear distance between supports.
  - Minimum bearing length of  $1\frac{3}{4}$ " end (no web stiffeners) and  $3\frac{1}{2}$ " intermediate (no web stiffeners).
  - Assumed composite action with a single layer of 24" on-center span-rated, glue-nailed floor panels for deflection only.
  - NBCC vibration criteria has not been considered; use minimum of table or vibration-controlled span.
- For continuous spans, ratio of short span to long span should be 0.4 or greater to prevent uplift.
- Tables show maximum allowable clear span of damaged joist and adjacent joists for **Header-Off** repair.
  - Assumes worst case of moment, shear, reaction, and deflection controls.
- Use proper backer blocks and hangers (Simpson Strong-Tie® IUS or better) on adjacent joists.
- Verify existing holes in TJI® joists are still acceptable prior to installing header.
- 12" maximum spacing between headers.



See *Specifier's Guide for TJI Joists – Canada (TJ-4500)* for additional information and installation details.

***If you have any questions, please contact your Weyerhaeuser representative.***



**[TYP] HANGER BACKER BLOCK (BOTH SIDES):**

- INSTALL TIGHT TO BOTTOM FLANGE
- ATTACH WITH FIFTEEN (15) (0.131" x 3") NAILS, CLINCHED WHEN POSSIBLE.
- IF NECESSARY, INCREASE HEIGHT OF FILLER/BACKER BLOCK FOR FACE MOUNT HANGERS AND MAINTAIN 1/8" GAP BELOW TOP FLANGE OF JOIST.
- FILLER/BACKER BLOCK DIMENSIONS SHOULD ACCOMMODATE REQUIRED NAILING WITHOUT SPLITTING (MIN. LENGTH = 12").

**HANGER BACKER BLOCK SIZES:**

TJI® 110 - 5/8" or 3/4"  
TJI® 210 - 3/4" or 7/8"  
TJI® 230 - 7/8" or 1" net  
TJI® 360 - 7/8" or 1" net  
TJI® 560 - 2x\_

Depth	TJI®	Simpson®	MiTek®
9 1/2"	110	IUS1.81/9.5	IHFL17925
	210	IUS2.06/9.5	IHFL20925
	230	IUS2.37/9.5	IHFL23925
	360	IUS2.37/9.5	IHFL23925
	560	IUS3.56/9.5	IHFL35925
11 7/8"	110	IUS1.81/11.88	IHFL17112
	210	IUS2.06/11.88	IHFL20112
	230	IUS2.37/11.88	IHFL23112
	360	IUS2.37/11.88	IHFL23112
	560	IUS3.56/11.88	IHFL35112
14"	110	IUS1.81/14	IHFL1714
	210	IUS2.06/14	IHFL2014
	230	IUS2.37/14	IHFL2314
	360	IUS2.37/14	IHFL2314
	560	IUS3.56/14	IHFL3514
16"	210	IUS2.06/16	IHFL2016
	230	IUS2.37/16	IHFL2316
	360	IUS2.37/16	IHFL2316
	560	IUS3.56/16	IHFL3516