



# Holden Grate-Lock® Chock Inspection and Repair Standards: Procedure and Examples

(July 2017)

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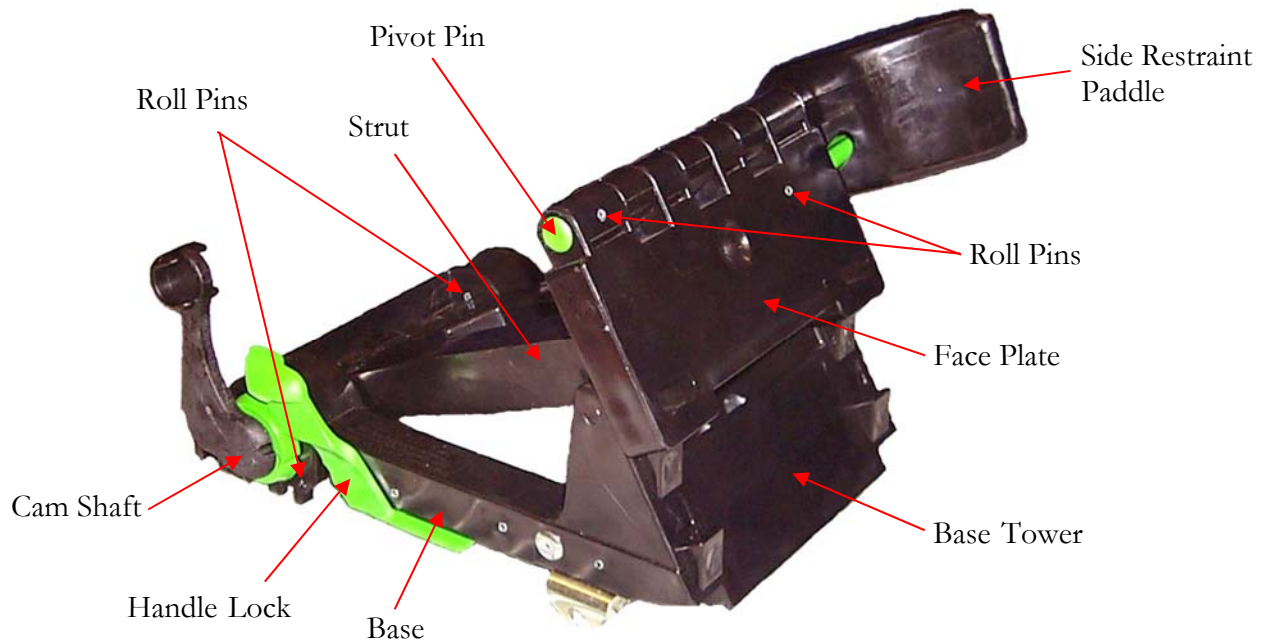
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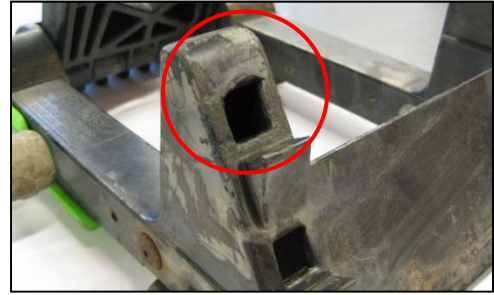
## A. Upperside Components

All major plastic chock components, namely the Base, Strut, and Face Plate should be examined for cracks, fractures, and visible deformations like strain whitening marks. (See Figure 1 for component nomenclature). If defects are found, then the chock is considered to be non-functional and must be repaired or replaced as outlined in the following sections.



**Figure 1: Upperside Component Nomenclature**

- a) The tab engagement holes, found on the Base tower front faces, should be checked for cracks through member or for excessive or imbalanced elongation. Normal wear and elongation is acceptable and not a consideration for replacement, as long as both Face Plate tabs lock into place. If the holes are cracked or excessively elongated (see Figure 2), the chock is considered to be non-functional and must be replaced and sent for reconditioning.



**Figure 2: Elongated Tab Engagement Holes**

- b) If the tower part of the Base has been pushed forward or is distorted, the Face Plate may not sit properly against the Base. If the Face Plate does not sit properly in any height setting, the chock is considered to be non-functional and must be replaced and sent for reconditioning.

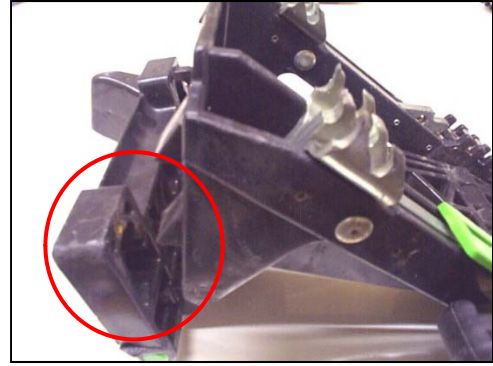
- c) Deformation of the cross web on the top side of the chock Base or strain whitening marks found in the corners of the cross web indicate a weakened structural component. (See Figure 3). However, in both cases, the chock is still considered to be functional and does not need to be replaced.



**Figure 3: Deformed Cross Web on Base**

- d) The Side Restraint Paddle may have minor deformation, or may be cracked where the paddle arm meets the main body of the Strut. (See Figure 1). Although the chock's lateral restraint capability may be compromised, the chock is still considered to be functional, provided the chock can be adjusted normally. The Side Restraint Paddle is considered to be non-functional when found broken or bent beyond a point of being functional for use. If cracks are found in the webbing of the underside of the Strut (see Figure 6), or if Strut is completely broken through with clear separation, the chock is considered to be non-functional and must be replaced and sent for reconditioning.

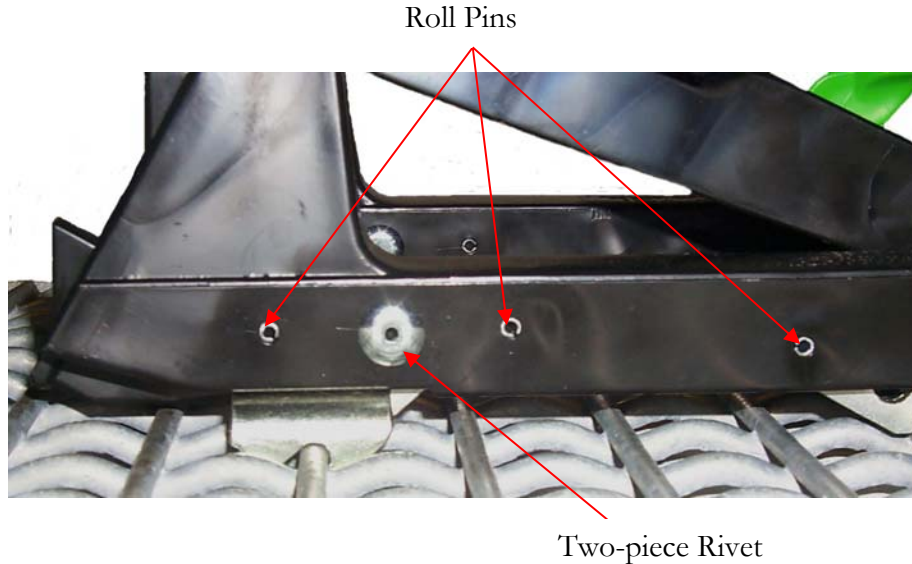
- e) The Face Plate tabs should be checked to ensure that they are neither missing (see Figure 4), nor bent, nor cracked where they meet the Face Plate. In the latter case, the chock may still appear to be fully functional. However, in all cases the chock is considered to be non-functional and must be replaced and sent for reconditioning.



**Figure 4: Missing Face Plate Tabs**

- f) Ensure that the Operating Handle has not broken off of the Cam Shaft. In addition, check that it rotates with some resistance. If there is no resistance, the Cam Lifters are excessively worn. In both cases, the chock is considered to be non-functional and must be replaced and sent for reconditioning. Check that the Handle Lock is not missing, broken or deformed. The Handle Lock should prevent the Cam Shaft from rotating back. If it is missing, broken or deformed excessively, the chock is considered to be non-functional and a new Handle Lock must be replaced in kind. This repair can be performed in the field.

## B. Side View Components



**Figure 5: Side View Component Nomenclature**

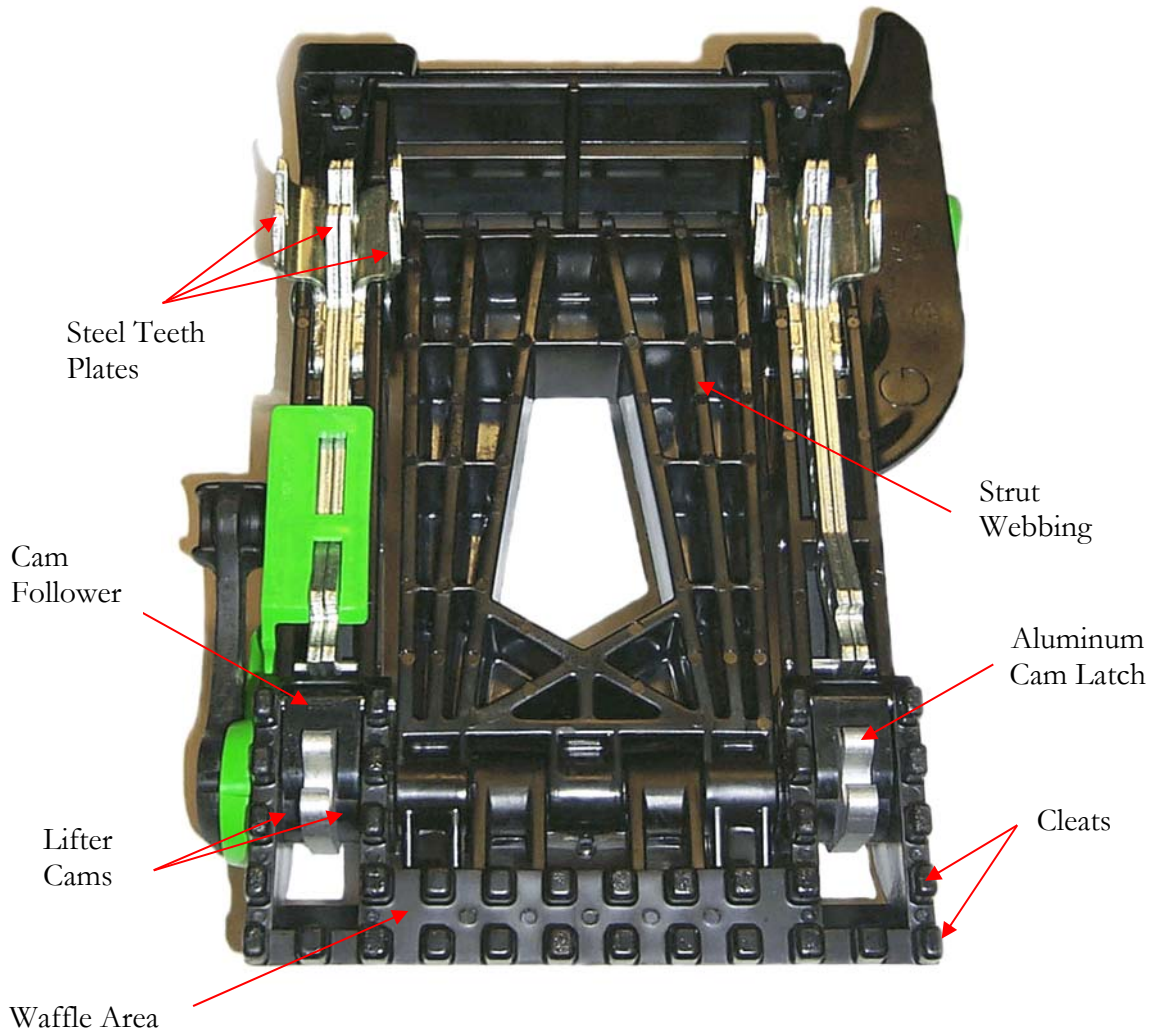
- a) The Roll Pins in the Chock Base (12) and in the Face Plate (2) should not be missing or protruding. (See Figures 1 and 5). If any pin is missing, the chock is considered to be non-functional and a new Roll Pin must be replaced in kind. If any pin is protruding by more than

1/8", it must be **lightly** hammered in until flush with Base surface. These repairs can be performed in the field.

- b) Both Two-piece Rivets should be present and tight up to the Chock Base without any play. If any is missing or not tight, the chock is considered to be non-functional and a new Two-piece Rivet must be replaced in kind. This repair can be performed in the field.

### C. Underside Components

All components of the chock should be checked to ensure they are not missing, and have not been deformed or otherwise damaged. (See Figure 6).



**Figure 6: Underside Component Nomenclature**

- a) Verify that the left, the right, and the center Steel Teeth Plates are all present and not damaged. If any Steel Teeth Plate is missing or any adjacent Tooth tips are bent (see Figure 7), the chock is considered to be non-functional and must be replaced. If a single steel tooth is bent, straighten accordingly. This repair can be performed in the field. Minor wear and normal rusting is not a reason to replace the chock.



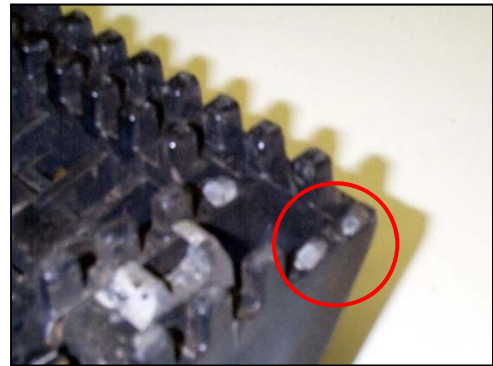
**Figure 7: Bent Adjacent Tooth Tips**

- b) The Grating Latch teeth must be checked for distortion or elongation. If either tooth is deformed or broken off (see Figure 8), the chock is considered to be non-functional and must be replaced and sent for reconditioning.



**Figure 8: Broken Grating Latch Teeth**

- c) All the cleats in the “waffle area” found on the chock underside should be straight. If three adjacent cleats or more than five cleats over the entire waffle area are missing (see Figure 9), the chock is considered to be non-functional and must be replaced and sent for reconditioning.



**Figure 9: Missing Cleats on Waffle Area**



## HOLDEN GRATE-LOCK<sup>®</sup> CHOCK REPAIR DECISION MATRIX

Chock Side	Article	Component	Defect Found	Is Chock Functional?	Recommended Repair Decision	Comments
A. Upperside Components	General	Any of the major plastic components	Cracks, fractures or visible deformations	No	Send for Reconditioning	
	a)	Base Tower Tab Engagement Holes	Cracked or excessively elongated	No	Send for Reconditioning	
	b)	Base Tower	Face Plate does not sit properly	No	Send for Reconditioning	
	c)	Base Cross Web	Strain whitening marks in corners or visible deformation	Yes	Use as is	
	d)	Strut Side Restraint Paddle	Deformed, bent or cracked near main body	Yes	Use as is	
			Broken or excessively bent	No	Send for Reconditioning	
	e)	Face Plate Tabs	Missing, deformed or hairline crack	No	Send for Reconditioning	
	f)	Cam Shaft Operating Handle	Broken	No	Send for Reconditioning	
			Rotates without any resistance	No	Send for Reconditioning	
	g)	Handle Lock	Broken, missing or deformed excessively	No	Repair in the Field	Order OEM Part



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Chock Side	Article	Component	Defect Found	Is Chock Functional?	Recommended Repair Decision	Comments
B. Side View Components	a)	Roll Pins	Protruding by more than 1/8" or missing	No	Repair in the Field	Lightly hammer Roll Pin until it is flush with Base. Order OEM Parts.
	b)	Two-piece Rivets	Not tight or missing	No	Repair in the Field	Remove by drilling through rivet. Order OEM Parts.

C. Underside Components	a)	Steel Teeth Plates	Missing plates or adjacent tooth tips bent	No	Send for Reconditioning	
			Single tooth tip bent	No	Repair in the Field	Grip the tooth firmly with pliers and bend it back into alignment.
	b)	Grating Latch Teeth	Deformed or broken	No	Send for Reconditioning	
	c)	Base Cleats	Three adjacent or more than five cleats over waffle area broken or missing	No	Send for Reconditioning	
			Two pairs of adjacent cleats or a total of five cleats over waffle area broken or missing	No	Repair in the Field	Grip the cleat firmly with pliers and bend away from the Base until it breaks off. Use a file to remove any residual shards.