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**Bobcat**®

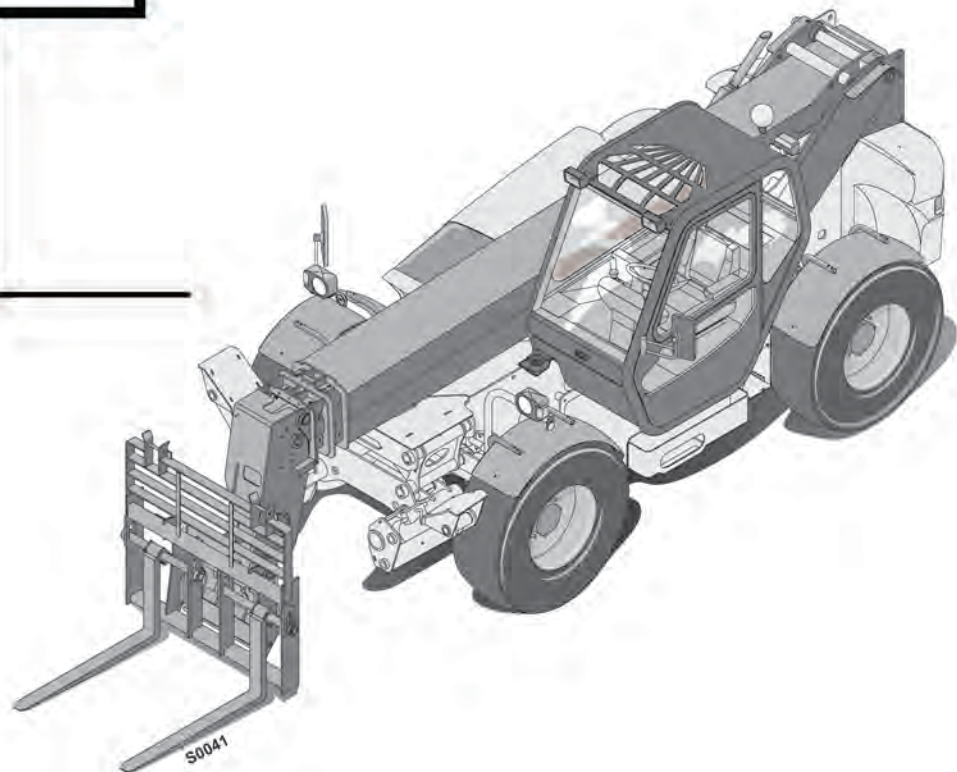
**T40140**

**S/N 3603 12001  
& above**

# **Service Manual - V2 Boom**

**T40170**

**S/N 3609 12001  
& above**



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**IMPORTANT**

**This document provides specific information for the new version of the T40140 and T40170 telescopic handlers. Read this document for a better understanding of the advantages this version has over previous versions of telescopic handlers.**

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# NEW BOOM

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## Introduction

The principal change that characterises both new machines is the design and construction of a new boom. It is simple but heavy-duty for machines in the 14-17 meter category.

The new boom uses the most advanced technology on the market.

The simple, modern design integrates a new technology with the following features:

- Compensation cylinder.
- Reduced weight of booms.
- 78% less pressure on the pads.
- 100% increase of pad / boom contact surface area.
- Simplified maintenance
- A counter jib allowing the boom to be horizontal under full load.
- Change of location of the electric enclosure of the boom tip.

Figure 1



## Stronger boom

### Material

A high elastic limit (HEL) steel is used to build the new generation boom, resulting in a 28% increase in strength compared to the previous version.

- V1 strength: 36 kg/ mm<sup>2</sup>
- V2 strength: 50 kg/ mm<sup>2</sup>

### Counter jib

A counter jib was created to keep the boom perfectly horizontal when fully extended under load, to avoid the "fishing pole" effect. This technique is used in crane construction.

Figure 2



## New boom design

This new boom was created to simplify all maintenance operations as well as exceptional operations, such as removing the telescoping cylinder or hydraulic hoses.

The inside of the boom is broken down into two independent, removable subassemblies:

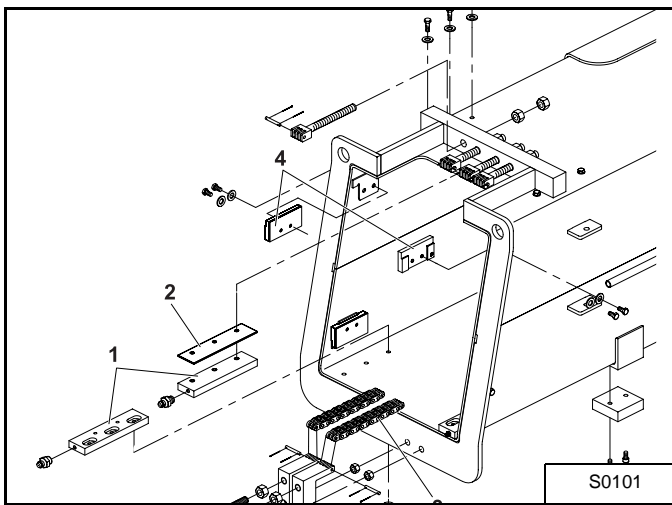
- The telescoping cylinder (right).
- The cassette (left).

As viewed from the back of the machine.

### Different components of the boom

#### Front part of element 1

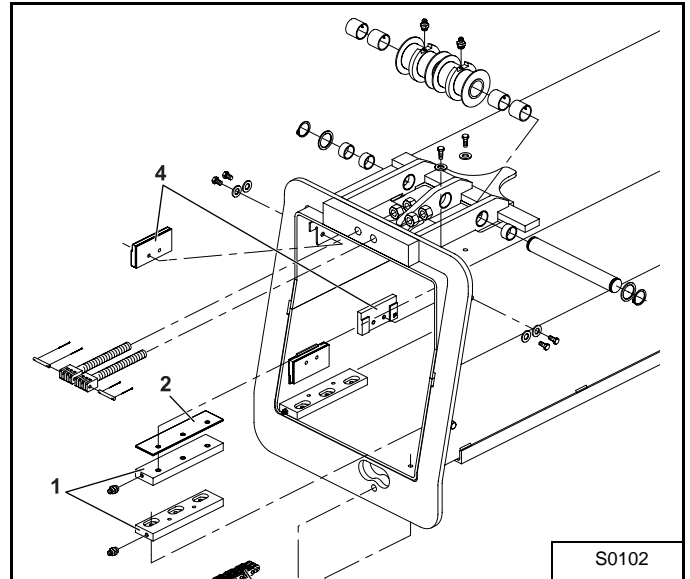
Figure 3



Ref.	Description
1	Upper and lower pads <ul style="list-style-type: none"> <li>• Quantity = 4</li> <li>• Do not insert adjusting shims with the lower pads.</li> <li>• Reduce play by inserting shims only with the upper pads.</li> </ul>
2	Adjusting shims
3	Boom retracting chains <ul style="list-style-type: none"> <li>• Connected to element 1 and element 3.</li> </ul>
4	Side pads <ul style="list-style-type: none"> <li>• Quantity = 4, two of which are 13mm.</li> <li>• Install 13mm thick pads on the left side of the caisson and adjust with pads of appropriate thickness to limit the play.</li> </ul>

#### Front part of element 2

Figure 4



Ref.	Description
1	Upper and lower pads <ul style="list-style-type: none"> <li>• Quantity = 4</li> <li>• Do not insert adjusting shims with the lower pads.</li> <li>• Reduce play by inserting shims only with the upper pads.</li> </ul>
2	Adjusting shims
3	Boom retracting chain <ul style="list-style-type: none"> <li>• Connecting element 2 and element 4.</li> </ul>
4	Side pads <ul style="list-style-type: none"> <li>• Quantity = 4, two of which are 13mm.</li> <li>• Install 13mm thick pads on the left side of the caisson and adjust with pads of appropriate thickness to limit the play.</li> </ul>
5	Chain rollers for boom extension <ul style="list-style-type: none"> <li>• Chains connecting element 1 to element 3.</li> </ul>

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