

SERVICE MANUAL

T6.120 / T6.140 / T6.150 / T6.155

T6.160 / T6.165 / T6.175

T6.140 AutoCommand / T6.150 AutoCommand

T6.160 AutoCommand

Tractor

Part number 47665859

English

February 2014





SERVICE MANUAL



**T6.120 , T6.140 AutoCommand , T6.140 , T6.150 AutoCommand , T6.150 ,
T6.155 , T6.160 AutoCommand , T6.160 , T6.165 , T6.175**

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INTRODUCTION

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Foreword

IMPORTANT INFORMATION

All repair and maintenance works listed in this manual must be carried out only by staff belonging to the NEW HOLLAND Service network, strictly complying with the instructions given and using, whenever required, the special tools.

Anyone who carries out the above operations without complying with the prescriptions shall be responsible for the subsequent damages.

The manufacturer and all the organizations of its distribution chain, including - without limitation - national, regional or local dealers, reject any responsibility for damages due to the anomalous behavior of parts and/or components not approved by the manufacturer himself, including those used for the servicing or repair of the product manufactured or marketed by the Manufacturer. In any case, no warranty is given or attributed on the product manufactured or marketed by the Manufacturer in case of damages due to an anomalous behavior of parts and/or components not approved by the Manufacturer.

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Foreword - How to use and navigate through this manual

This manual has been produced by a new technical information system. This new system is designed to deliver technical information electronically through web delivery (eTIM), DVD, and paper manuals. A coding system called SAP has been developed to link the technical information to other Product Support functions, e.g., Warranty.

Technical information is written to support the maintenance and service of the functions or systems on a customer's machine. When a customer has a concern on their machine it is usually because a function or system on their machine is not working at all, is not working efficiently, or is not responding correctly to their commands. When you refer to the technical information in this manual to resolve that customer's concern, you will find all the information classified using the SAP coding, according to the functions or systems on that machine. Once you have located the technical information for that function or system, you will then find all the mechanical, electrical or hydraulic devices, components, assemblies, and sub assemblies for that function or system. You will also find all the types of information that have been written for that function or system: the technical data (specifications), the functional data (how it works), the diagnostic data (fault codes and troubleshooting), and the service data (remove, install adjust, etc.).

By integrating SAP coding into technical information, you will be able to search and retrieve just the right piece of technical information you need to resolve that customer's concern on his machine. This is made possible by attaching 3 categories to each piece of technical information during the authoring process.

The first category is the Location, the second category is the Information Type and the third category is the Product:

- LOCATION - the component or function on the machine, that the piece of technical information is going to describe (e.g., Fuel tank).
- INFORMATION TYPE - the piece of technical information that has been written for a particular component or function on the machine (e.g., Capacity would be a type of Technical Data describing the amount of fuel held by the fuel tank).
- PRODUCT - the model for which the piece of technical information is written.

Every piece of technical information will have those three categories attached to it. You will be able to use any combination of those categories to find the right piece of technical information you need to resolve that customer's concern on their machine.

That information could be:

- the procedure for how to remove the cylinder head
- a table of specifications for a hydraulic pump
- a fault code
- a troubleshooting table
- a special tool



SERVICE MANUAL

Engine



**T6.120 , T6.140 AutoCommand , T6.140 , T6.150 AutoCommand , T6.150 ,
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Engine - 10

Engine and crankcase - 001

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Engine and crankcase - 001

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Engine - Torque

T6.120	WE
T6.140	WE
T6.150	WE
T6.155	WE
T6.160	WE
T6.165	WE
T6.175	WE

PART		TORQUE
		Nm (lb ft)
Bolts securing connecting rod caps:	1st phase	30 +/- 3 (22.1269 +/- 2.2127)
	2nd phase	60 +/- 5 (44.2537 +/- 3.6878)
	Angle closed	60 ° +/- 5 °
Nuts securing engine cover (6 cylinder engines refer to figure 3 4 cylinder engines refer to figure 4) M8 125		25 ± 5 (18.4391 ± 3.6878)
Bolts securing engine flywheel:	1st phase	30 +/- 4 (22.1269 +/- 2.9502)
	2nd phase	60 ° +/- 5 °
Bolts securing pulley and damper:	1st phase	50 ± 5 (36.8781 ± 3.6878) +
	2nd phase	90 ° +/- 5 °
Cooling nozzles (mechanical engines only)		15 ± 3(11 ± 2)
Bolts securing injectors on cylinder head:		110 ± 5 (81.1318 ± 3.6878)
Nut securing P.A.P. gear:		105 ± 7 (77.4440 ± 5.1629)
Nut securing compressor gear:		125 ± 19 (92.1953 ± 14.0137)
Bolts securing timing gear:		36 ± 4 (26.5522 ± 2.9502)
Unions securing piston lubrication nozzles:		15 ± 3 (11.0634 ± 2.2127)
Bolts securing timing system casing M8 1.25x40 M10 1.5x30		24 ± 4 (17.7015 ± 2.9502) 47 ± 5 (34.6654 ± 3.6878)
Bolts securing front cover M10 1.5x30		24 ± 4 (17.7015 ± 2.9502)
Bolts securing main bearing caps with angle closed M12 1.50 12.9	1st phase	50 +/- 6 (36.8781 +/- 4.4254)
	2nd phase	80 +/- 6 (59.0050 +/- 4.4254)
	Angle closed	+ 90 ° +/- 5 °
Viti fissaggio Ladder Frame: M10 1.5x25		43 ± 5 (31.7152 ± 3.6878)
Bolts securing lifting brackets: M12 1.75x25 M10		7 ± 12 (5.1629 ± 8.8507) 43 ± 5 (31.7152 ± 3.6878)
Bolts securing cooler (refer to figure 7) M8 1.25x35 M8 1.25x100 M12 Connector		25 ± 5 (18.4391 ± 3.6878) 25 ± 5 (18.4391 ± 3.6878) 25 ± 5 (18.4391 ± 3.6878)
Bolts securing valve cover M8 Nuts		24 ± 4 (17.7015 ± 2.9502)
Engine Vent Fastener (Ccv) M8 1.25x45 M8 1.25x35		24 ± 4 (17.7015 ± 2.9502) 24 ± 4 (17.7015 ± 2.9502)
Bolts securing oil sump 6 cylinder engines (refer to figure 8) ♦ Tightening Bolts No 31 & 34 M10 1.5x45 Tightening Bolts No 4-14; 17-27; 32-33 M10 1.5x90		50 ± 5 (36.8781 ± 3.6878) 70 ± 5 (51.6293 ± 3.6878)



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PART	TORQUE
	Nm (lb ft)
Tightening Bolts No 1-3, 28-30 M10 1.5x125	70 ± 5 (51.6293 ± 3.6878)
Tightening Bolts No 15-16 M10 15x190	70 ± 5 (51.6293 ± 3.6878)
Bolts securing oil sump 4 cylinder engines (refer to figure 9) ♦	
Tightening Bolts No 23 & 26 M10 1.5x45	50 ± 5 (36.8781 ± 3.6878)
Tightening Bolts No 3-10; 13-20; 24-25 M10 1.5x90	70 ± 5 (51.6293 ± 3.6878)
Tightening Bolts No 1-2, 21-22 M10 1.5x125	70 ± 5 (51.6293 ± 3.6878)
Tightening Bolts No 11-12 M10 15x190	70 ± 5 (51.6293 ± 3.6878)
Bolts / Plugs On Head	
1/2 in Nptf	24 ± 4 (17.7015 ± 2.9502)
3/4 in Nptf	36 ± 5 (26.5522 ± 3.6878)
1/4 in Nptf	12 ± 2 (8.8507 ± 1.4751)

♦ Lubricate With Engine Oil Before Assembly
(continued)

TORQUE WRENCH SETTINGS

PART	TORQUE
	Nm (lb ft)
Bolts securing 6 cylinder head (refer to figure 1) ♦	
Step 1. Tightening bolts No 1-2-7-8-9-10-15-16-17-18-23-24-25-26 M12 1.75x150	55 (40.5659)
Step 2.	+90 °
Step 3.	+90 °
Step 1. Tightening bolts No 3-4-5-6-11-12-13-14-19-20-21-22 M12 1.75x130	35 (25.8147)
Step 2.	+90 °
Step 3.	+90 °
Bolts securing 6 cylinder head (refer to figure 2) ♦	
Step 1. Tightening bolts No 1-2-7-8-9-10-15-16-17-18 M12 1.75x150	55 (40.5659)
Step 2.	+90 °
Step 3.	+90 °
Step 1. Tightening bolts No 3-4-5-6-11-12-13-14 M12 1.75x130	35 (25.8147)
Step 2.	+90 °
Step 3.	+90 °
Bolts securing heater grille: M6	10 ± 2 (7.3756 ± 1.4751)
Bolts securing intake manifold: M8 1.25x25	25 ± 5 (18.4391 ± 3.6878)
M8 1.25x60	25 ± 5 (18.4391 ± 3.6878)
Bolts securing exhaust manifold on 6 cylinder head: (refer to figure 5) M12 1.75x25	80 ± 5 (62.6928 ± 3.6878)
Bolts securing exhaust manifold on 4 cylinder head: (refer to figure 6) M8 1.25x25	25 ± 5 (18.4391 ± 3.6878)
M8 1.25x14	25 ± 5 (18.4391 ± 3.6878)
Bolts securing connecting rod caps (6 cylinder engines): M11 1.25 10.9 Flg	1st phase 30 +/- 3 (22.1269 +/- 2.2127)
	2nd phase 60 +/- 5 (44.2537 +/- 3.6878)
Torque/Angle	+60 ° +/- 5 °
Bolts securing connecting rod caps (4 cylinder engines): M10 1.25x52 10.9 Flg	1st phase 30 +/- 3 (22.1269 +/- 2.2127)
	2nd phase 60 +/- 5 (44.2537 +/- 3.6878)

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