

300 SERIES OEM ENGINES

Technical Manual
TM-1190 (Dec-84)

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The specifications and design information contained in this manual were correct at the time it was printed. It is John Deere's Policy to continually improve and update our machines. Therefore, the specifications and design information are subject to change without notice. Wherever applicable, specifications and design information are in accordance with SAE and ICED standards.

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OEM ENGINES SERVICED BY THIS TECHNICAL MANUAL

3-164D
3-179D
4-219D
4-239D
4-239T
4-276D

4-276T
6-329D
6-359D
6-359T
6-414D
6-414T

Accessible Hardware Torque Values

The table below gives correct torque values for various bolts and cap screws. The table lists torques in the U.S. unit of measure (lb-ft), SI metrics (Nm) and conventional metrics (kg/m). Most hardware used is high-strength (note dashes on hex. heads).




The types of bolts and cap screws are identified by head markings as follows:

Plain Head: regular machine bolts and cap screws.

3-Dash Head: tempered steel high-strength bolts and cap screws.

6-Dash Head: tempered steel extra high-strength bolts and cap screws.

Machine bolts and cap screws 7/8-inch (22.2 mm) and larger are sometimes formed hot rather than cold, which accounts for the lower torque.

RECOMMENDED TORQUE - COARSE AND FINE THREADS											
B			D			F					
											
BOLT DIAMETER	PLAIN HEAD			THREE DASHES			SIX DASHES				
	LB-FT	Nm	Kg-m	LB-FT	Nm	Kg-m	LB-FT	Nm	Kg-m		
1/4	NOT USED	NOT USED	NOT USED	10	14	1	14	19	2		
5/16	NOT USED	NOT USED	NOT USED	20	27	3	30	41	4		
3/8	NOT USED	NOT USED	NOT USED	35	47	5	50	68	7		
7/16	35	47	5	55	75	8	80	108	11		
1/2	55	75	8	85	115	12	120	163	17		
9/16	75	102	10	130	176	18	175	237	24		
5/8	105	142	15	170	230	24	240	325	33		
3/4	185	251	26	300	407	42	425	576	59		
7/8	160	217	22	445	603	62	685	929	95		
1	250	339	35	670	908	93	1030	1396	142		
1-1/8	330	447	46	910	1234	126	1460	1979	202		
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Group 0400 REMOVAL AND INSTALLATION



GENERAL INFORMATION

Learn principles of operation of engines from "Basic Engine" in Fundamentals of Service Manual 30 - ENGINES.

Design Characteristics

The 3-164D, 3-179D, 4-219D, 4-239D, 4-276D, 6-329D, 6-359D, and 6-414D engines have:

1. Internal combustion
2. Four strokes per cycle
3. In-line type cylinder block
4. Diesel fueling
5. Valves in cylinder head
6. Natural aspiration
7. Liquid coolant
8. Pressure lubrication

The 4-239T, 4-276T, 6-359T, and 6-414T engines have:

1. Internal combustion
2. Four strokes per cycle
3. In-line type cylinder block
4. Diesel fueling
5. Valves in cylinder head
6. Turbocharger
7. Liquid coolant
8. Pressure lubrication

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