

Torque and Rebuild Specifications for International Harvester D414 Engines



Cylinder Liner Protrusion	.002" - .005"																								
Main Bearing Cap	115 ft. lbs.																								
Connecting Rod Bolt	60 ft. lbs., 130 ft. lbs.																								
Piston Protrusion	.008" - .025"																								
Crankshaft End Play	.006" - .012"																								
Cylinder Head Bolts SEQUENCE "A"	110 ft. lbs. Sequence A																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">20</td> <td style="text-align: center;">12</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> <td style="text-align: center;">13</td> <td style="text-align: center;">21</td> </tr> <tr> <td style="text-align: center;">24</td> <td style="text-align: center;">16</td> <td style="text-align: center;">8</td> <td style="text-align: center;">1</td> <td style="text-align: center;">9</td> <td style="text-align: center;">17</td> </tr> <tr> <td style="text-align: center;">23</td> <td style="text-align: center;">15</td> <td style="text-align: center;">7</td> <td style="text-align: center;">2</td> <td style="text-align: center;">10</td> <td style="text-align: center;">18</td> </tr> <tr> <td style="text-align: center;">19</td> <td style="text-align: center;">11</td> <td style="text-align: center;">3</td> <td style="text-align: center;">6</td> <td style="text-align: center;">14</td> <td style="text-align: center;">22</td> </tr> </table>	20	12	4	5	13	21	24	16	8	1	9	17	23	15	7	2	10	18	19	11	3	6	14	22	155 ft. lbs. Sequence A
20	12	4	5	13	21																				
24	16	8	1	9	17																				
23	15	7	2	10	18																				
19	11	3	6	14	22																				
←FRONT	INTAKE SIDE																								
SEQUENCE "B"	165 ft. lbs. Sequence B																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">21</td> <td style="text-align: center;">22</td> <td style="text-align: center;">23</td> <td style="text-align: center;">24</td> <td style="text-align: center;">25</td> <td style="text-align: center;">26</td> </tr> <tr> <td style="text-align: center;">14</td> <td style="text-align: center;">15</td> <td style="text-align: center;">16</td> <td style="text-align: center;">17</td> <td style="text-align: center;">18</td> <td style="text-align: center;">19</td> </tr> <tr> <td style="text-align: center;">7</td> <td style="text-align: center;">8</td> <td style="text-align: center;">9</td> <td style="text-align: center;">10</td> <td style="text-align: center;">11</td> <td style="text-align: center;">12</td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> <td style="text-align: center;">6</td> </tr> </table>	21	22	23	24	25	26	14	15	16	17	18	19	7	8	9	10	11	12	1	2	3	4	5	6	Re-torque and check valve lash after one hour of operation.
21	22	23	24	25	26																				
14	15	16	17	18	19																				
7	8	9	10	11	12																				
1	2	3	4	5	6																				
←FRONT	INTAKE SIDE																								
Valve Clearance (set cold)	ESN ->126953 ESN 123954->																								
	I .020" E .025" I .025" E .025"																								
w/ #1 @ TDC Comp Adjust	#1IE, #2I, #3E, #4I, #5E																								
w/ #1 @ TDC Exhaust Adjust	#2E, #3I, #4E, #5E, #6IE																								