Product: KOMATSU D155AX-5 Dozer Bulldozer Service Repair Workshop Manual
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SHOP MANUAL

KOMATSU

D155AX-5

MACHINE MODEL	SERIAL NUMBER
D155AX-5	**70001 and up**

- This shop manual may contain attachments and optional equipment that are not available in your area. Please consult your local Komatsu distributor for those items you may require. Materials and specifications are subject to change without notice.
- D155AX-5 mounts the SA6D140E-2 or SA6D140E-3 engine. For details of the engine, see the 6D140-2 or 140-3 Series Engine Shop Manual.

Sample of manual. Download All 296 pages at:
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	30- 74	①		30-131	①		30-171	①		30-229	①		30-286	①
	30- 75	①		30-132	①		30-172	①		30-230	①		30-287	①
	30- 76	①		30-133	①		30-173	①		30-231	①		30-288	①
	30- 77	①		30-134	①		30-174	①		30-232	①		30-289	①
	30- 78	①		30-135	①		30-175	①		30-233	①		30-290	①
	30- 79	①		30-136	①		30-176	①		30-234	①		30-291	①
	30- 80	①		30-137	①		30-177	①		30-235	①		30-292	①
	30- 81	①		30-138	①		30-178	①		30-236	①		30-293	①
	30- 82	①		30-139	①		30-179	①		30-237	①		30-294	①
	30- 83	①		30-140	①		30-180	①		30-238	①		30-295	①
	30- 84	①		30-141	①		30-181	①		30-239	①		30-296	①
	30- 85	①		30-142	①		30-182	①		30-240	①		30-297	①
	30- 86	①		30-143	①		30-183	①		30-241	①		30-298	①
	30- 87	①		30-144	①		30-184	①		30-242	①		30-299	①
	30- 88	①		30-145	①		30-185	①		30-243	①		30-300	①
	30- 89	①		30-146	①		30-186	①		30-244	①		30-301	①
	30- 90	①		30-146-1	②		30-187	①		30-245	①		30-302	①
	30- 91	①		30-146-2	②		30-188	①		30-246	①		30-303	①
	30- 92	①		30-146-3	②		30-189	①		30-247	①		30-304	①
	30- 93	①		30-146-4	②		30-190	①		30-248	①		30-305	①
	30- 94	①		30-146-5	②		30-191	①		30-249	①		30-306	①
	30- 95	①		30-146-6	②		30-192	①		30-250	①		30-307	①
	30- 96	①		30-146-7	②		30-193	①		30-251	①		30-308	①
	30- 97	①		30-146-8	②		30-194	①		30-252	①		40- 1	③
	30- 98	①		30-146-9	②		30-195	①		30-253	①		40- 2	
	30- 99	①		30-146-10	②		30-196	①		30-254	①		40- 3	
	30-100	①		30-146-11	②		30-197	①		30-255	①		40- 4	
	30-101	①		30-146-12	②		30-198	①		30-256	①		40- 6	
	30-102	①		30-146-13	②		30-199	①		30-257	①		40- 7	
	30-103	①		30-146-14	②		30-200	①		30-258	①		40- 8	
	30-104	①		30-146-15	②		30-201	①		30-259	①		40- 10	
	30-105	①		30-146-16	②		30-202	①		30-260	①		40- 11	
	30-106	①		30-146-17	②		30-203	①		30-261	①		40- 12	
	30-107	①		30-147	①		30-204	①		30-262	①		40- 13	
	30-108	①		30-148	①		30-205	①		30-263	①		40- 14	
	30-109	①		30-149	①		30-207	①		30-264	①		40- 16	③
	30-110	①		30-150	①		30-208	①		30-265	①		40- 17	
	30-111	①		30-151	①		30-209	①		30-266	①		40- 18	
	30-112	①		30-152	①		30-210	①		30-267	①		40- 19	
	30-113	①		30-153	①		30-211	①		30-268	①		40- 20	
	30-114	①		30-154	①		30-212	①		30-269	①		40- 21	
	30-115	①		30-155	①		30-213	①		30-270	①		40- 22	
	30-116	①		30-156	①		30-214	①		30-271	①		40- 24	
	30-117	①		30-157	①		30-215	①		30-272	①		40- 25	
	30-118	①		30-158	①		30-216	①		30-273	①		40- 26	
	30-119	①		30-159	①		30-217	①		30-274	①		40- 28	③
	30-120	①		30-160	①		30-218	①		30-275	①		40- 29	③
	30-121	①		30-161	①		30-219	①		30-276	①		40- 29-1	③

Mark	Pages	Revision number	Mark	Pages	Revision number	Mark	Pages	Revision number	Mark	Pages	Revision number	Mark	Pages	Revision number
	40-29-2	③												
	40-30													
	40-31													
	40-32													
	40-33													
	40-34													
	40-35													
	40-36													
	40-37													
	40-38	③												
	40-39													
	40-40	③												
	40-42	③												
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	40-44	③												
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	40-75	③												
	40-76													
	40-78													
	40-79													
	90- 1	③												
	90- 3													
	90- 5													
	90- 7	③												
	90- 9	③												
	90-11	③												
	90-13	③												
	90-15	③												
	90-17	③												
	90-19	③												

20 TESTING AND ADJUSTING

STANDARD VALUE TABLES
Standard value table for engine 20- 2
Standard value table for chassis 20- 3
Standard value table for electrical parts 20- 8
TESTING AND ADJUSTING 20-101
TROUBLESHOOTING 20-201

★ The following precautions are necessary, when using the standard value tables for testing and adjusting, or for troubleshooting .

1. The values in the table are for new machines, and are obtained from reference to values when shipping from the factory. Therefore, they should be used as target values for judging the progress of wear, or when repairing the machine.
2. The standard values for judging failures are based on the results of various tests when shipping the machine from the factory. These values should be used as reference together with the repair condition and operating record of the machine to make judgements on failures.
3. The values in the table should not be used for judging claims.

⚠ **When carrying out testing, adjusting, or troubleshooting, stop the machine on level ground, install the safety pins and block the tracks.**

⚠ **When carrying out work together with other workers, use agreed signals and do not allow unauthorized persons near the machine.**

⚠ **When checking the water level, always wait for the water to cool down. If the radiator cap is removed when the water is still hot, the water will spurt out and cause burns.**

⚠ **Be careful not to get caught in the fan or other rotating parts.**

STANDARD VALUE TABLE FOR ENGINE

Serial No. 70001 – 75000

Machine model			D155AX-5	
Engine			SA6D140E-2	
Item	Measurement conditions	Unit	Standard value for new machine	Service limit value
Engine speed	High idling	rpm	2,050 ± 50	—
	Low idling		700 $^{+25}_{0}$	—
	Rated speed		1,900	—
Air supply pressure	At rated output	kPa {mmHg}	Min. 85.3 {Min. 640}	67.9 {510}
Exhaust temperature	Whole speed range (Ambient temperature: 20°C)	°C	Max. 680	700
Exhaust gas color	At sudden acceleration	Bosch index	Max. 6.0	8.0
	At high idling		Max. 1.0	2.0
Valve clearance (at normal temperature)	Intake valve	mm	0.43	—
	Exhaust valve		0.80	—
Compression pressure (SAE15W-40 or SAE30)	Oil temperature: 40 – 60°C (Engine speed)	MPa {kg/cm^2} (rpm)	Min. 3.14 {Min.32} (200 – 250)	2.16 {22} (200 – 250)
Blow-by pressure (SAE15W-40 or SAE30)	At rated output (Water temperature: Operating range)	kPa {mmH$_2$O}	Max. 0.98 {Max. 100}	1.96 {200}
Oil pressure (Oil temperature: Min. 80°C)	At high idling SAE15W-40 or SAE30	MPa {kg/cm^2}	0.29 – 0.49 {3.0 – 5.0}	0.20 {2.0}
	SAE10W		0.25 – 0.44 {2.5 – 4.5}	0.18 {1.8}
	At low idling SAE15W-40 or SAE30		Min. 0.1 {Min. 1.0}	0.07 {0.7}
	SAE10W		Min. 0.1 {Min. 1.0}	0.07 {0.7}
Oil temperature	Whole speed range (inside oil pan)	°C	80 – 110	120
Fuel injection timing	Before top dead center	°	15 ± 0.5	15 ± 0.5
Alternator belt tension	Deflection when pressed with finger force of approx. 59 N {6 kg}	mm	15	15
Air conditioner compressor belt tension			10	10

Serial No. 75001 and up

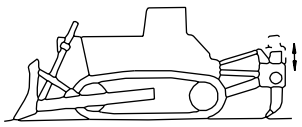
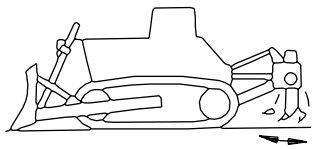
Machine model			D155AX-5	
Engine			SA6D140E-3	
Item	Measurement conditions	Unit	Standard value for new machine	Service limit value
Engine speed	High idling	rpm	2,100 ± 50	—
	Low idling		740 $^{+25}_{0}$	—
	Rated speed		1,900	—
Air supply pressure	At rated output	kPa {mmHg}	Min. 85.3 {Min. 640}	67.9 {510}
Exhaust temperature	Whole speed range (Ambient temperature: 20°C)	°C	Max. 680	700
Exhaust gas color	At sudden acceleration	Bosch index	Max. 4.0	8.0
	At high idling		Max. 1.0	2.0
Valve clearance (at normal temperature)	Intake valve	mm	0.43	—
	Exhaust valve		0.80	—
Compression pressure (SAE15W-40 or SAE30)	Oil temperature: 40 – 60°C (Engine speed)	MPa {kg/cm^2} (rpm)	Min. 3.14 {Min.32} (200 – 250)	2.16 {22} (200 – 250)
Blow-by pressure (SAE15W-40 or SAE30)	At rated output (Water temperature: Operating range)	kPa {mmH$_2$O}	Max. 0.98 {Max. 100}	1.96 {200}
Oil pressure (Oil temperature: Min. 80°C)	At high idling SAE15W-40 or SAE30	MPa {kg/cm^2}	0.29 – 0.49 {3.0 – 5.0}	0.20 {2.0}
	SAE10W		0.25 – 0.44 {2.5 – 4.5}	0.18 {1.8}
	At low idling SAE15W-40 or SAE30		Min. 0.1 {Min. 1.0}	0.07 {0.7}
	SAE10W		Min. 0.1 {Min. 1.0}	0.07 {0.7}
Oil temperature	Whole speed range (inside oil pan)	°C	80 – 110	120
Fuel injection timing	Before top dead center	°	15 ± 0.5	15 ± 0.5
Alternator belt tension	Deflection when pressed with finger force of approx. 59 N {6 kg}	mm	15	15
Air conditioner compressor belt tension			10	10

STANDARD VALUE TABLE FOR CHASSIS

Machine model						D155AX-5	
Category	Item		Measurement conditions		Unit	Standard value for new machine	Service limit value
Engine stall speed	Torque converter stall speed		• Engine oil pressure: Within operating range • Engine oil temperature: Within operating range • Hydraulic oil temperature: 45 – 55 °C • F3 • Ripper RAISE stall		rpm	1,580 ± 100	1,420
	Steering relief + work equipment raise stall speed ※ 1					1,410 ± 100	1,250
Control lever travel, pedal travel	Fuel control lever		Center of lever knob	Engine low idling → High idling	mm	105 ± 20	105 ± 20
				Engine low idling → Stop		60 ± 20	60 ± 20
	Decelerator pedal		Center of pedal			56 ± 15	56 ± 15
	Joystick	Gear shift	• Engine stopped • Center of lever knob	1st ↔ 2nd	deg.	13 ± 5	13 ± 5
				2nd ↔ 3rd		13 ± 5	13 ± 5
		Directional		N ↔ FORWARD	mm	45 ± 15	45 ± 15
				N ↔ REVERSE		45 ± 15	45 ± 15
		Steering		N → Right turn		57 ± 15	63 ± 15
				N → Left turn		57 ± 15	63 ± 15
	Brake pedal		• Engine at low idling • Center of pedal	Total travel		79 ± 10	79 ± 10
				Position until brake oil pressure becomes 0		61	61
	Blade lever		• Engine at low idling • Center of lever knob • Hydraulic oil temperature: 45 – 55°C	HOLD ↔ RAISE, FLOAT		80 ± 15	80 ± 15
				HOLD ↔ LEFT, RIGHT TILT		60 ± 10	60 ± 10
	Ripper lever		• Engine at low idling • Center of lever knob • Hydraulic oil temperature: 45 – 55°C	HOLD ↔ RAISE, LOWER		85 ± 15	85 ± 15
				HOLD ↔ Digging angle decrease, increase		85 ± 15	85 ± 15
Operating force of control lever, pedal	Fuel control lever ※ 1		Center of lever knob	Engine low idling ↔ High idling	N {kg}	98 – 157 {10 – 16}	177 {18}
				Engine low idling ↔ Stop		98 – 177 {10 – 18}	196 {20}
	Decelerator pedal		• Engine stopped • Center of pedal			78 ± 29 {8 ± 3}	147 {15}
	Joystick	Gear shift	• Engine stopped • Center of lever knob	1st → 2nd	Nm {kgm}	216 ± 78 {22 ± 8}	216 ± 78 {22 ± 8}
				2nd → 3rd		372 ± 78 {38 ± 8}	372 ± 78 {38 ± 8}
				2nd → 1st		284 ± 78 {29 ± 8}	284 ± 78 {29 ± 8}
				3rd → 2nd		186 ± 78 {19 ± 8}	186 ± 78 {19 ± 8}

※ 1: Serial No. 70001 – 75000

Machine model					D155AX-5	
Category	Item	Measurement conditions		Unit	Standard value for new machine	Service limit value
Operating effort of control lever, pedal	Joystick – Directional	• Engine stopped • Center of lever knob	N ↔ FORWARD	N {kg}	53.9 ± 19.1 {5.5 ± 2.0}	78.4 {8.0}
			N ↔ REVERSE		53.9 ± 19.1 {5.5 ± 2.0}	78.4 {8.0}
	Joystick – Steering	• Engine stopped • Center of lever knob	N ↔ Left turn		17.6 ± 19.1 {1.8 ± 2.0}	44.1 {4.5}
			N ↔ Right turn		17.6 ± 19.1 {1.8 ± 2.0}	44.1 {4.5}
	Brake pedal	• Engine at low idling • Center of pedal			461 ± 98 {47 ± 10}	608 {62}
	Blade lever	• Engine at low idling • Hydraulic oil temperature: 45 – 55°C • Center of lever knob	HOLD ↔ RAISE, FLOAT		29.4 ± 9.8 {3.0 ± 1.0}	49.0 {5.0}
			HOLD ↔ LEFT, RIGHT TILT		29.4 ± 9.8 {2.5 ± 1.0}	44.1 {4.5}
	Ripper lever	• Engine at low idling • Hydraulic oil temperature: 45 – 55°C • Center of lever knob	HOLD ↔ RAISE, LOWER		29.4 ± 9.8 {2.5 ± 1.0}	44.1 {4.5}
			HOLD↔Digging angle decrease, increase		29.4 ± 9.8 {2.5 ± 1.0}	44.1 {4.5}
Power train oil pressure	Torque converter inlet port pressure	• Power train oil temperature: Operating range	Engine at low idling	MPa {kg/cm²}	$0.1^{+0.1}_{-0.09}$ $\{1.0^{+1.0}_{-0.9}\}$	$0.1^{+0.1}_{-0.09}$ $\{1.0^{+1.0}_{-0.9}\}$
			Engine at high idling		0.83 ± 0.15 {8.5 ± 1.5}	0.83 ± 0.15 {8.5 ± 1.5}
	Torque converter outlet port pressure		Engine at low idling		$0.1^{+0.1}_{-0.09}$ $\{1.0^{+1.0}_{-0.9}\}$	$0.1^{+0.1}_{-0.09}$ $\{1.0^{+1.0}_{-0.9}\}$
			Engine at high idling		0.44 ± 0.15 {4.5 ± 1.5}	0.44 ± 0.15 {4.5 ± 1.5}
	Transmission main relief pressure		Engine at high idling		$2.94^{+0.29}_{0}$ $\{30^{+3}_{0}\}$	2.74 {28}
	Transmission modulating pressure		Engine at high idling		$2.94^{+0.29}_{0}$ $\{30^{+3}_{0}\}$	2.74 {28}
	Brake actuating pressure		Engine at low idling		2.75 ± 0.29 {28 ± 3}	2.16 {22}
			Engine at high idling		2.75 ± 0.29 {28 ± 3}	2.16 {22}
HSS circuit oil pressure	HSS main pressure	• Engine at high idling • Oil temperature: 45 – 55°C		MPa {kg/cm²}	38.2 – 41.7 {390 – 425}	38.2 – 41.7 {390 – 425}
	HSS charge pressure				3.72 ± 0.29 {38 ± 3}	3.24 {33}
	HSS servo charge pressure, PPC relief pressure				4.12 ± 0.29 {42 ± 3}	3.53 {36}
Power train	Travel speed	• Level road surface • Engine water temperature: Within operating range • Run-up distance: 10–30 m • Measurement distance: 20 m	FORWARD 1st	km/h	3.5 ± 0.2	3.5 ± 0.2
			FORWARD 2nd		6.2 ± 0.3	6.2 ± 0.3
			FORWARD 3rd		10.8 ± 0.6	10.8 ± 0.6
			REVERSE 1st		4.8 ± 0.2	4.8 ± 0.2
			REVERSE 2nd		8.4 ± 0.3	8.4 ± 0.3
			REVERSE 3rd		13.9 ± 0.6	13.9 ± 0.6

Machine model							D155AX-5	
Category	Item			Measurement conditions		Unit	Standard value of new machine	Service limit value
Work equipment	Work equipment speed	Ripper LIFT		Work equipment posture  TYD00007 • Engine at high idling • Hydraulic oil temperature: 45 – 55°C • Lowest shank hole	LIFT	sec.	2.5 ± 0.5	4.0
					LOWER		3.0 ± 1.0	5.0
		Ripper TILT		Work equipment posture  TYD00008 • Engine at high idling • Hydraulic oil temperature: 45 – 55°C • Lowest shank hole • Digging angle decrease ↔ increase	Decrease		3.0 ± 0.5	4.5
					Increase		2.5 ± 0.5	4.0
	Time lag	Blade		• Engine at high idling • Hydraulic oil temperature: 45 – 55°C • Raise blade to maximum height, then lower blade and measure time taken from point where blade contacts ground to point where idler comes off ground			1.5 ± 0.5	2.5
		Ripper		• Engine at high idling • Hydraulic oil temperature: 45 – 55°C • Raise ripper to maximum height, then lower ripper and measure time taken from point where ripper contacts ground to point where sprocket comes off ground			0 – 1.0	1.5
	Oil leakage	Cylinder	Blade tilt	• Hydraulic oil temperature: 45 – 55°C • Extend piston rod fully and disconnect hose at head end • Engine at high idling • Measure oil leakage during one minute of relief		cc/min	Max. 3.0	12
			Ripper lift				Max. 2.7	11
			Ripper tilt				Max. 2.7	11

STANDARD VALUE TABLE FOR ELECTRICAL PARTS

Serial No. 70001 – 75000

<table>
<tr><th>System</th><th>Component</th><th>Connector No.</th><th>Inspection method</th><th>Judgement table</th><th>Measurement condition</th></tr>
<tr><td rowspan="5">HSS system</td><td rowspan="2">Engine speed sensor</td><td rowspan="2">CN-ENG (male)</td><td>Measure resistance</td><td>If the condition is as shown in the table below, it is normal
<table><tr><td>Between (1) – (2)</td><td>500 – 1000 Ω</td></tr><tr><td>Between (1), (2) – chassis</td><td>Min.1 MΩ</td></tr></table></td><td>1) Turn starting switch OFF.
2) Disconnect connector.</td></tr>
<tr><td>Measure voltage</td><td>If the condition is as shown in the table below, it is normal
<table><tr><td>Between (1) – (2)</td><td>0.5 – 3.0 V</td></tr></table>★ When using circuit tester, select AC voltage range.</td><td>1) Disconnect connectors.
2) Engine running</td></tr>
<tr><td>Steering potentiometer</td><td>CN-STR</td><td>Measure voltage</td><td>If the condition is as shown in the table below, it is normal
<table><tr><td colspan="2">Between (4) – (1)</td><td>5.0 ± 0.25 V</td></tr><tr><td rowspan="2">Lever fully at left</td><td>Between (3) – (1)</td><td>4.15 ± 0.25 V</td></tr><tr><td>Between (2) – (1)</td><td>0.85 ± 0.25 V</td></tr><tr><td rowspan="2">Lever at N</td><td>Between (3) – (1)</td><td>2.5 ± 0.25 V</td></tr><tr><td>Between (2) – (1)</td><td>2.5 ± 0.25 V</td></tr><tr><td rowspan="2">Lever fully at right</td><td>Between (3) – (1)</td><td>0.85 ± 0.25 V</td></tr><tr><td>Between (2) – (1)</td><td>4.15 ± 0.25 V</td></tr></table></td><td>1) Turn starting switch ON.
2) Insert T-adapter.
3) Turn joystick to steering position.</td></tr>
<tr><td>REVERSE sensing potentiometer</td><td>CN-RSS</td><td>Measure voltage</td><td>If the condition is as shown in the table below, it is normal
<table><tr><td colspan="2">Between (1) – (3)</td><td>5.0 ± 0.25 V</td></tr><tr><td>Lever at N</td><td rowspan="2">Between (2) – (3)</td><td>Max. 3.5 V</td></tr><tr><td>Lever at REVERSE</td><td>3.5 – 4.4 V</td></tr></table></td><td>1) Turn starting switch ON.
2) Insert T-adapter.
3) Turn joystick to directional position.</td></tr>
<tr><td>Steering circuit oil pressure sensor A</td><td>CN-STHP1</td><td>Measure voltage</td><td>If the condition is as shown in the table below, it is normal
<table><tr><td colspan="2">Between (2) – (1)</td><td>20 – 30 V</td></tr><tr><td rowspan="2">Between (3) – (1)</td><td>Engine stopped</td><td>0.8 – 1.2 V</td></tr><tr><td>Engine running + Steering relief</td><td>4.0 – 4.6 V</td></tr></table></td><td>1) Turn starting switch ON.
2) Insert T-adapter.</td></tr>
<tr><td>Steering circuit oil pressure sensor B</td><td>CN-STHP2</td><td>Measure voltage</td><td>If the condition is as shown in the table below, it is normal
<table><tr><td colspan="2">Between (2) – (1)</td><td>20 – 30 V</td></tr><tr><td rowspan="2">Between (3) – (1)</td><td>Engine stopped</td><td>0.8 – 1.2 V</td></tr><tr><td>Engine running + Steering relief</td><td>4.0 – 4.6 V</td></tr></table></td><td>1) Turn starting switch ON.
2) Insert T-adapter.</td></tr>
</table>

<table>
<tr><th>System</th><th>Component</th><th>Connector No.</th><th>Inspection method</th><th>Judgement table</th><th>Measurement condition</th></tr>
<tr><td rowspan="2">Monitor system</td><td>Engine oil pressure switch</td><td>CN-403 (male)</td><td>Measure resistance</td><td>If the condition is as shown in the table below, it is normal<table><tr><td rowspan="2">Between terminal – body</td><td>Oil pressure is above 0.05 MPa {0.5 kg/cm²}</td><td>Min. 1 MΩ</td></tr><tr><td>Oil pressure is below 0.05 MPa {0.5 kg/cm²}</td><td>Max. 1 Ω</td></tr></table></td><td>1) Turn starting switch OFF.
2) Disconnect conectors.</td></tr>
<tr><td>Alternator</td><td>CN-112</td><td>Measure voltage</td><td>If the condition is as shown in the table below, it is normal<table><tr><td>Between terminal R – chassis</td><td>27.5 – 29.5 V</td></tr></table>★ If the battery is old, or after starting in cold area, the voltage may not rise for some time.</td><td>1) Run engine. (half throttle or above)</td></tr>
<tr><td rowspan="3">Others</td><td>Neutral safety switch</td><td>CN-152 (male)</td><td>Measure resistance</td><td>If the condition is as shown in the table below, it is normal<table><tr><td rowspan="2">Between (1) – (3)</td><td>Lever at N or FORWARD</td><td>Min. 1M Ω</td></tr><tr><td>Lever at REVERSE</td><td>Max. 1 Ω</td></tr></table></td><td>1) Turn starting switch OFF.
2) Disconnect connectors.
3) Turn joystick to directional position</td></tr>
<tr><td>Blade pitch solenoid</td><td>CN-454 (male)</td><td>Measure resistance</td><td>If the condition is as shown in the table below, it is normal<table><tr><td>Between (1) – (2)</td><td>40 – 80 Ω</td></tr><tr><td>Between (1), (2) – chassis</td><td>Min. 1MΩ</td></tr></table></td><td>1) Turn starting switch OFF.
2) Disconnect connectors.</td></tr>
<tr><td>Pin puller solenoid</td><td>CN-246 (male)</td><td>Measure resistance</td><td>If the condition is as shown in the table below, it is normal<table><tr><td>Between (1) – (2)</td><td>40 – 80 Ω</td></tr><tr><td>Between (1), (2) – chassis</td><td>Min. 1 MΩ</td></tr></table></td><td>1) Turn starting switch OFF.
2) Disconnect connectors.</td></tr>
</table>

Serial No. 75001 and up

<table>
<tr><th>System</th><th>Component</th><th>Connector No.</th><th>Inspection method</th><th>Judgement table</th><th>Measurement condition</th></tr>
<tr><td rowspan="8">HSS system</td><td rowspan="2">Engine speed sensor</td><td rowspan="2">CN-E07 (male)</td><td>Measure resistance</td><td>If the condition is as shown in the table below, it is normal
<table><tr><td>Between (1) – (2)</td><td>500 – 1000 Ω</td></tr><tr><td>Between (1), (2) – chassis</td><td>Min.1 MΩ</td></tr></table></td><td>1) Turn starting switch OFF.
2) Disconnect connector.</td></tr>
<tr><td>Measure voltage</td><td>If the condition is as shown in the table below, it is normal
<table><tr><td>Between (1) – (2)</td><td>0.5 – 3.0 V</td></tr></table>★ When using circuit tester, select AC voltage range.</td><td>1) Engine running
2) Insert T-adapter.</td></tr>
<tr><td>Steering potentiometer</td><td>CN-STR</td><td>Measure voltage</td><td>If the condition is as shown in the table below, it is normal
<table><tr><td colspan="2">Between (4) – (1)</td><td>5.0 ± 0.25 V</td></tr><tr><td rowspan="2">Lever fully at left</td><td>Between (3) – (1)</td><td>4.15 ± 0.25 V</td></tr><tr><td>Between (2) – (1)</td><td>0.85 ± 0.25 V</td></tr><tr><td rowspan="2">Lever at N</td><td>Between (3) – (1)</td><td>2.5 ± 0.25 V</td></tr><tr><td>Between (2) – (1)</td><td>2.5 ± 0.25 V</td></tr><tr><td rowspan="2">Lever fully at right</td><td>Between (3) – (1)</td><td>0.85 ± 0.25 V</td></tr><tr><td>Between (2) – (1)</td><td>4.15 ± 0.25 V</td></tr></table></td><td>1) Turn starting switch ON.
2) Insert T-adapter.
3) Turn joystick to steering position.</td></tr>
<tr><td>REVERSE sensing potentiometer</td><td>CN-RSS</td><td>Measure voltage</td><td>If the condition is as shown in the table below, it is normal
<table><tr><td colspan="2">Between (1) – (3)</td><td>5.0 ± 0.25 V</td></tr><tr><td>Lever at N</td><td rowspan="2">Between (2) – (3)</td><td>Max. 3.5 V</td></tr><tr><td>Lever at REVERSE</td><td>3.5 – 4.4 V</td></tr></table></td><td>1) Turn starting switch ON.
2) Insert T-adapter.
3) Turn joystick to directional position.</td></tr>
<tr><td>Steering circuit oil pressure sensor A</td><td>CN-ST1</td><td>Measure voltage</td><td>If the condition is as shown in the table below, it is normal
<table><tr><td colspan="2">Between (2) – (1)</td><td>20 – 30 V</td></tr><tr><td rowspan="2">Between (3) – (1)</td><td>Engine stopped</td><td>0.8 – 1.2 V</td></tr><tr><td>Engine running + Steering relief</td><td>4.0 – 4.6 V</td></tr></table></td><td>1) Turn starting switch ON.
2) Insert T-adapter.</td></tr>
<tr><td>Steering circuit oil pressure sensor B</td><td>CN-ST2</td><td>Measure voltage</td><td>If the condition is as shown in the table below, it is normal
<table><tr><td colspan="2">Between (2) – (1)</td><td>20 – 30 V</td></tr><tr><td rowspan="2">Between (3) – (1)</td><td>Engine stopped</td><td>0.8 – 1.2 V</td></tr><tr><td>Engine running + Steering relief</td><td>4.0 – 4.6 V</td></tr></table></td><td>1) Turn starting switch ON.
2) Insert T-adapter.</td></tr>
<tr><td>HSS charge circuit oil pressure sensor</td><td>CN-406 (male)</td><td>Measure resistance</td><td>If the condition is as shown in the table below, it is normal
<table><tr><td rowspan="2">Between (1) – (2)</td><td>Engine stopped</td><td>Min. 1 MΩ</td></tr><tr><td>Engine running</td><td>Max. 1 Ω</td></tr><tr><td colspan="2">Between (1), (2) – chassis</td><td>Min. 1 MΩ</td></tr></table></td><td>1) Turn starting switch ON.
2) Disconnect connector.</td></tr>
</table>

System	Component	Connector No.	Inspection method	Judgement table	Measurement condition
HSS system	Work equipment circuit oil pressure sensor	CN-HHP	Measure voltage	If the condition is as shown in the table below, it is normal Between (2) – (1): 20 – 30 V Between (3) – (1), Engine stopped: 0.8 – 1.2 V Between (3) – (1), Engine started + work equipment relief: 2.4 – 3.0 V	1) Turn starting switch ON. 2) Insert T-adapter.
	Backup alarm switch	CN-251 (male)	Measure resistance	If the condition is as shown in the table below, it is normal Between (1) – (3), Lever at N or FORWARD: Min. 1 MΩ Between (1) – (3), Lever at REVERSE: Max. 1 Ω	1) Turn starting switch OFF. 2) Disconnect connectors. 3) Turn joystick to directional position.
	HSS pump solenoid A	CN-PUPA	Measure resistance	If the condition is as shown in the table below, it is normal Between (1) – (2): 10 – 20 Ω Between (1), (2) – chassis: Min. 1 MΩ	1) Turn starting switch OFF. 2) Disconnect connectors.
	HSS pump solenoid B	CN-PUPB	Measure resistance	If the condition is as shown in the table below, it is normal Between (1) – (2): 10 – 20 Ω Between (1), (2) – chassis: Min. 1 MΩ	1) Turn starting switch OFF. 2) Disconnect connectors.
	Backup alarm relay	CN-014 (male)	Measure resistance	If the condition is as shown in the table below, it is normal Between (1) – (2): 200 – 400 Ω Between (3) – (5): Min. 1 MΩ Between (3) – (6): Max. 1 Ω	1) Turn starting switch OFF. 2) Disconnect connectors.
	HSS controller: Power supply for controller	CN-ST1	Measure voltage	If the condition is as shown in the table below, it is normal Between (8),(18) – chassis: 20 – 30 V Between (8),(18) – (9),(19): 20 – 30 V	1) Turn starting switch ON. 2) Insert T-adaper.
	HSS controller: Power supply for solenoid	CN-ST1	Measure voltage	If the condition is as shown in the table below, it is normal Between (17) – chassis: 20 – 30 V Between (17) – (9),(19): 20 – 30 V	1) Turn starting switch ON. 2) Insert T-adaper.
	HSS controller: Net work (S-NET)	CN-ST1	Measure voltage	If the condition is as shown in the table below, it is normal Between (1),(12) – (9),(19): 4 – 8 V	1) Turn starting switch ON. 2) Insert T-adaper.
	HSS controller: Engine speed sensor	CN-ST3	Measure voltage	If the condition is as shown in the table below, it is normal Between (4) – (12): 0.5 – 3.0 V ★ When using circuit tester, select AC voltage range.	1) Engine running 2) Insert T-adaper.

System	Component		Connector No.	Inspection method	Judgement table	Measurement condition
HSS system	HSS controller	5-V power supply for potentiometer	CN-ST2	Measure voltage	If the condition is as shown in the table below, it is normal Between (10) – (9): 5.0 ± 0.25 V	1) Turn starting switch ON. 2) Insert T-adaper.
		Steering potentiometer	CN-ST2	Measure voltage	If the condition is as shown in the table below, it is normal Lever fully at right: Between (19) – (9): 4.15 ± 0.25 V Between (20) – (9): 0.85 ± 0.25 V Lever at N: Between (19) – (9): 2.5 ± 0.25 V Between (20) – (9): 2.5 ± 0.25 V Lever fully at left: Between (19) – (9): 0.85 ± 0.25 V Between (20) – (9): 4.15 ± 0.25 V	1) Turn starting switch ON. 2) Insert T-adapter. 3) Turn joystick to steering position.
		Travel REVERSE sensing potentiometer	CN-ST2 CN-ST3	Measure voltage	If the condition is as shown in the table below, it is normal Between CN-ST3(10) – CN-ST2(9): Lever at N: Max. 3.5 V Lever at REVERSE: 3.5 – 4.4 V	1) Turn starting switch ON. 2) Insert T-adapter. 3) Turn joystick to directional position
		Steering circuit oil pressure sensor A	CN-ST2 CN-ST3	Measure voltage	If the condition is as shown in the table below, it is normal Between CN-ST3(1) – CN-ST2(9): Engine stopped: 0.8 – 1.2 V Engine running + Steering relief: 4.0 – 4.6 V	1) Turn starting switch ON. 2) Insert T-adapter.
		Steering circuit oil pressure sensor B	CN-ST2 CN-ST3	Measure voltage	If the condition is as shown in the table below, it is normal Between CN-ST3(9) – CN-ST2(9): Engine stopped: 0.8 – 1.2 V Engine running + Steering relief: 4.0 – 4.6 V	1) Turn starting switch ON. 2) Insert T-adapter.
		HSS charge oil pressure sensor	CN-ST2	Measure voltage	If the condition is as shown in the table below, it is normal Between (8) – chassis: Engine stopped: 20 – 30 V Engine running: Max. 1 V	1) Turn starting switch ON. 2) Insert T-adapter.
		Work equipment circuit oil pressure sensor	CN-ST2 CN-ST3	Measure voltage	If the condition is as shown in the table below, it is normal Between CN-CH2(2) – CN-CH1(9): Engine stopped: 0.8 – 1.2 V Engine running + Work equipment relief: 2.4 – 3.0 V	1) Turn starting switch ON. 2) Insert T-adapter.
		Backup alarm switch	CN-ST2	Measure voltage	If the condition is as shown in the table below, it is normal Between (7) – chassis: Lever at N or FORWARD: 20 – 30 V Lever at REVERSE: Max. 1 V	1) Turn starting switch ON. 2) Insert T-adapter. 3) Turn joystick to directional position.

System	Component		Connector No.	Inspection method	Judgement table	Measurement condition
HSS system	HSS controller	Backup alarm relay	CN-ST1	Measure voltage	If the condition is as shown in the table below, it is normal Between (11) – chassis: Lever at N or FORWARD → Max. 1 V; Lever at REVERSE → 20 – 30 V(※) ※ Voltage changes 20 – 30 V to below 1V alternatively every one second.	1) Turn starting switch ON. 2) Insert T-adapter. 3) Turn joystick to directional position.
		Buzzer cancel switch 1	CN-ST2	Measure voltage	If the condition is as shown in the table below, it is normal Between ST2(6) – chassis: Switch ON → 20 – 30 V; Switch OFF → Max. 1 V	1) Turn starting switch ON. 2) Insert T-adapter.
		Buzzer cancel switch 2	CN-ST2	Measure voltage	If the condition is as shown in the table below, it is normal Between ST2(5) – chassis: Switch ON → 20 – 30 V; Switch OFF → Max. 1 V	1) Turn starting switch ON. 2) Insert T-adapter.
		Mode selection switch 1	CN-ST2	Measure voltage	If the condition is as shown in the table below, it is normal Between ST2(18) – chassis: Switch ON → 20 – 30 V; Switch OFF → Max. 1 V	1) Turn starting switch ON. 2) Insert T-adapter.
		Mode selection switch 2	CN-ST2	Measure voltage	If the condition is as shown in the table below, it is normal Between ST2(17) – chassis: Switch ON → 20 – 30 V; Switch OFF → Max. 1 V	1) Turn starting switch ON. 2) Insert T-adapter.
		Servise switch	CN-ST2	Measure voltage	If the condition is as shown in the table below, it is normal Between ST2(4) – chassis: Switch ON → 20 – 30 V; Switch OFF → Max. 1 V	1) Turn starting switch ON. 2) Insert T-adapter.
		1st switch	CN-ST2	Measure voltage	If the condition is as shown in the table below, it is normal Between ST2(13) – chassis: Lever at 3rd or 2nd → 20 – 30 V; Lever at 1st → Max. 1 V	1) Turn starting switch ON. 2) Insert T-adapter. 3) Turn joystick to 3rd or 2nd position.
		2nd switch	CN-ST2	Measure voltage	If the condition is as shown in the table below, it is normal Between ST2(14) – chassis: Lever at 1st or 2nd → 20 – 30 V; Lever at 3rd → Max. 1 V	1) Turn starting switch ON. 2) Insert T-adapter. 3) Turn joystick to 2nd or 1st position.

System	Component		Connector No.	Inspection method	Judgement table	Measurement condition
Monitor panel system	Power train (Torque converter) oil temperature sensor		453 (male)	Measure resistance	If the condition is as shown in the table below, it is normal Between (1) – (2): When water temperature is 100°C: Approx. 3.8 kΩ When water temperature is 90°C: Approx. 4.9 kΩ When water temperature is 35°C: Approx. 29 kΩ When water temperature is 20°C: Approx. 52 kΩ When water temperature is 10°C: Approx. 80 kΩ	1) Turn starting switch OFF. 2) Disconnect conectors.
	Fuel level sensor		423 (male)	Measure resistance	If the condition is as shown in the table below, it is normal Between (1) – (2): At full: Max. approx. 12 Ω At empty: Approx. 85 – 110 Ω	1) Turn starting switch OFF. 2) Disconnect conectors.
	Alternator		ANB	Measure voltage	If the condition is as shown in the table below, it is normal Between terminal R – chassis: 27.5 – 29.5 V ★ If the battery is old, or after starting in cold area, the voltage may not rise for some time.	1) Run engine. (half throttle or above)
	Monitor panel (Caution module)	Hydraulic oil temperature sensor	CN1	Measure resistance	If the condition is as shown in the table below, it is normal Between (5) – (2): When oil temperature is below 105°C: Max. 1 V When oil temperature is abouve 105°C: 20 – 30 V	1) Insert T-adapter. 2) Turn starting switch ON.
		S-NET	CN1	Measure voltage	If the condition is as shown in the table below, it is normal Between (11) (12) – (10): 4.0 – 10.0 V	1) Insert T-adapter. 2) Turn starting switch ON.
		Power train (Torque converter) oil temperature sensor	CN1 (female) CN2 (female)	Measure resistance	If the condition is as shown in the table below, it is normal Between CN2 (2) – CN1 (2): Oil temperature: 50˚C (Level 1): Approx. 17 kΩ Oil temperature: 90˚C (Level 2): Approx. 5 kΩ Oil temperature: 110˚C (Level 3): Approx. 2.9 kΩ Oil temperature: 116˚C (Level 4): Approx. 2.5 kΩ Oil temperature: 120˚C (Level 5): Approx. 2.3 kΩ Oil temperature: 130˚C (Level 6): Approx. 2.3 kΩ	1) Turn starting switch OFF. 2) Disconnect conectors.
		Fuel level sensor	CN1 (female) CN2 (female)	Measure resistance	If the condition is as shown in the table below, it is normal Between CN2 (3) – CN1 (2): E: Approx. 75 kΩ Level 3/7: Approx. 50 kΩ Level 5/7: Approx. 35 kΩ F: Approx. 14 kΩ	1) Turn starting switch OFF. 2) Disconnect conectors.

System	Component		Connector No.	Inspection method	Judgement table	Measurement condition
Monitor pannel system	Monitor panel (Caution module)	Preheating signal	CN1 CN2	Measure voltage	If the condition is as shown in the table below, it is normal Between CN2 (5) – CN1 (2): When preheater is turned ON: 20 – 30 V; When preheater is turned OFF: Max. 1 V	1) Insert T-adapter. 2) Turn starting switch ON.
		Caution lamp	CN1 CN2	Measure voltage	If the condition is as shown in the table below, it is normal Between CN2 (7) – CN1 (2): When lamp is turned ON: Max. 6 V; When lamp is turned OFF: 20 – 30 V	1) Insert T-adapter. 2) Turn starting switch ON.
		Caution Buzzer	CN1 CN2	Measure voltage	If the condition is as shown in the table below, it is normal Between CN2 (8) – CN1 (2): When buzzer is turned ON: Max. 3 V; When buzzer is turned OFF: 20 – 30 V	1) Insert T-adapter. 2) Turn starting switch ON.
		Lighting signal	CN4	Measure voltage	If the condition is as shown in the table below, it is normal Between (1) – (2): When lamp switch is turned OFF: Max. 1 V; When lamp switch is turned ON: 20 – 30 V	1) Insert T-adapter. 2) Turn starting switch ON.
	Monitor panel (Tachometer module)	Backup power source	T01	Measure voltage	If the condition is as shown in the table below, it is normal Between (7) – (2): 20 – 30 V	1) Insert T-adapter. 2) Turn starting switch OFF.
		Starting switch ON signal	T01	Measure voltage	If the condition is as shown in the table below, it is normal Between (1) – (2): 20 – 30 V	1) Insert T-adapter. 2) Turn starting switch ON.
		Starting switch STAR signal	T01	Measure voltage	If the condition is as shown in the table below, it is normal Between (3) – (2): When starting switch is at ON position: Max. 1 V; When starting switch is at START position: 20 – 30 V	1) Insert T-adapter.
		Alternator	T01	Measure voltage	If the condition is as shown in the table below, it is normal Between (4) – (2): While engine is stopped: Max. 1 V; While engine is running: 27.5 – 29.5 V	1) Insert T-adapter.
		Service switch	T01	Measure voltage	If the condition is as shown in the table below, it is normal Between (5) – (2): When switch is turned OFF: 20 – 30 V; When switch is turned ON: Max. 1 V	1) Insert T-adapter. 2) Turn starting switch ON.
		S-NET	T01	Measure voltage	If the condition is as shown in the table below, it is normal Between (9) (10) – (8): 4.0 – 10.0 V	1) Insert T-adapter. 2) Turn starting switch ON.

System	Component		Connector No.	Inspection method	Judgement table	Measurement condition
Monitor panel system	Monitor panel (switch module)	Power sorce	S01	Measure voltage	If the condition is as shown in the table below, it is normal Between (1) – (2): 20 – 30 V ★ If the battery is old, or after starting in cold area, the voltage may not rise for some time.	1) Insert T-adapter. 2) Turn starting switch ON.
	Hydraulic oil temperature sensor		452 (male)	Measure resistance	If the condition is as shown in the table below, it is normal Between (1) – chassis: When oil temperature is below 105°C: Max. 1 Ω Between (1) – chassis: When oil temperature is abouve 105°C: Nin. 1 MΩ	1) Turn starting switch OFF. 2) Disconnect conectors.
	Service switch		X1	Measure resistance	If the condition is as shown in the table below, it is normal Between (1) – (2): OFF: ON Between (2) – (3): Max.1 Ω: Min.1 MΩ Between (3) – (4): Min.1 MΩ: Max.1 Ω Between (4) – (5): Max.1 Ω: Min.1 MΩ Between (5) – (6): Min.1 MΩ: Max.1 Ω	1) Turn starting switch OFF. 2) Disconnect conectors.
	Ribbon heater relay		HET (male)	Measure resistance	If the condition is as shown in the table below, it is normal Between (1) – (2): 200 – 400 Ω Between (3) – (5): Min.1 MΩ Between (3) – (6): Max.1 Ω	1) Turn starting switch OFF. 2) Disconnect conectors.
	Monitor panel (caution module)	Power sorce	CN1	Measure voltage	If the condition is as shown in the table below, it is normal Between (1) – (2): 4.0 – 10.0 V	1) Insert T-adapter. 2) Turn starting switch ON.
		Starting switch START signal	CN1	Measure resistance	If the condition is as shown in the table below, it is normal Between (3) – (2): When starting switch is at ON position: Max. 1 Ω Between (3) – (2): When starting switch is at START position: 20 – 30 V	1) Insert T-adapter.
		Alternator	CN1	Measure voltage	If the condition is as shown in the table below, it is normal Between (4) – (2): While engine is stopped: Max. 1 V Between (4) – (2): While engine is running: 27.5 – 29.5 V	1) Insert T-adapter.

TESTING AND ADJUSTING

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TOOLS FOR TESTING, ADJUSTING, AND TROUBLESHOOTING

Check or measurement item	Symbol		Part No.	Part Name	Remarks
Engine speed ※1	A		799-203-8001	Multi-tachometer	Digital display L : 60 – 2,000rpm H : 60 – 19,999rpm
Air supply pressure (boost pressure)	B		799-201-2202	Boost gauge kit	–101 – 199.9kPa{–750 – 1,500mmHg}
Temperature of water, oil , and exhaust gas	C		799-101-1502	Digital thermometer	– 99.9 – 1299°C
Exhaust color	D	1	799-201-9000	Handy smoke checker	Discoloration 0 – 70 % (with standard color) (Discoloration x 1/10 ≒ Bosch index)
		2	Commercially available	Smoke meter	
Valve clearance	E		795-125-1210	Feeler gauge	SA6D140E-2 Intake valve: 0.43mm, Exhaust valve: 0.80mm
			Commercially available		SA6D140E-3 Intake valve: 0.35mm, Exhaust valve: 0.57mm
Compression pressure ※1	F		795-502-1205	Compression gauge	0 – 6.9MPa {0 – 70kg/cm²}
			• 795-502-1510	• Adapter	
			• 795-502-1520	• Plate	
Blow-by pressure	G		799-201-1504	Blow by checker	0 – 4.9MPa {0 – 500mmH_2O}
Oil pressure	H	1	799-101-5002	Hydraulic tester	Pressure gauge: 2.5,5.9,39.2,58.8MPa {25,60,400,600kg/cm²}
			790-261-1203	Digital hydraulic tester	Pressure gauge: 58.8MPa{600kg/cm²}
			799-101-5220	Nipple	10 x 1.25
			07002-11023	O-ring	
		2	799-401-2320	Hydraulic gauge	0.98MPa {10kg/cm²}
Wear of sprocket	J		791-627-1160	Wear gauge	
Operating effort	K		79A-264-0021	Push-pull scale	0 – 294N {0 – 30kg}
			79A-264-0091	Push-pull scale	0 – 490N {0 – 50kg}
Stroke, hydraulic drift	L		Commercially available	Scale	
Work equipment speed	M		Commercially available	Stop watch	
Measuring voltage and resistance	N		79A-264-0211	Tester	
Troubleshooting of wiring harnesses	P		799-601-8000	T-adapter	
			799-601-7360	Adapter	For 5 pins relay

※1: SA6D140E-2 engine

MEASURING ENGINE SPEED

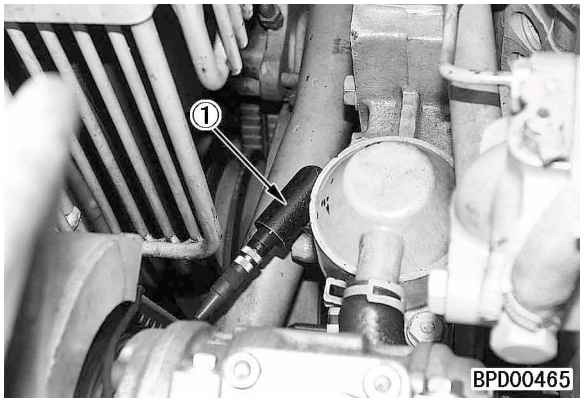
Serial No. 70001 – 75000

⚠ Be careful not to touch any hot parts when removing or installing the measuring tools.

★ Measure the engine speed under the following conditions.
- Coolant temperature: Within operating range
- Transmission oil temperature: Within operating range
- Hydraulic temperature: 45 – 55°C

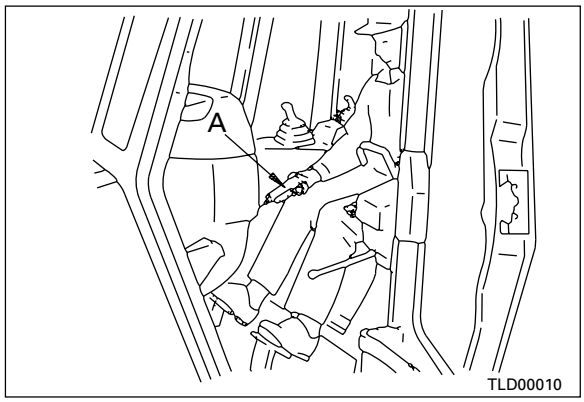
1. Remove cap (1) of the speed pickup port.

2. Install sensor ① of multi-tachometer **A** to the speed pickup port, then connect to multi-tachometer **A**.



3. Start the engine and measure the engine speed under the following conditions.
1) Measurement at low idling:
   i) Set the joystick and work equipment control lever to the neutral position.
   ii) Set the fuel control lever to the low idling position, then measure the engine speed.
2) Measurement at high idling
   i) Set the joystick and work equipment control lever to the neutral position.
   ii) Set the fuel control lever to the high idling position, then measure the engine speed.

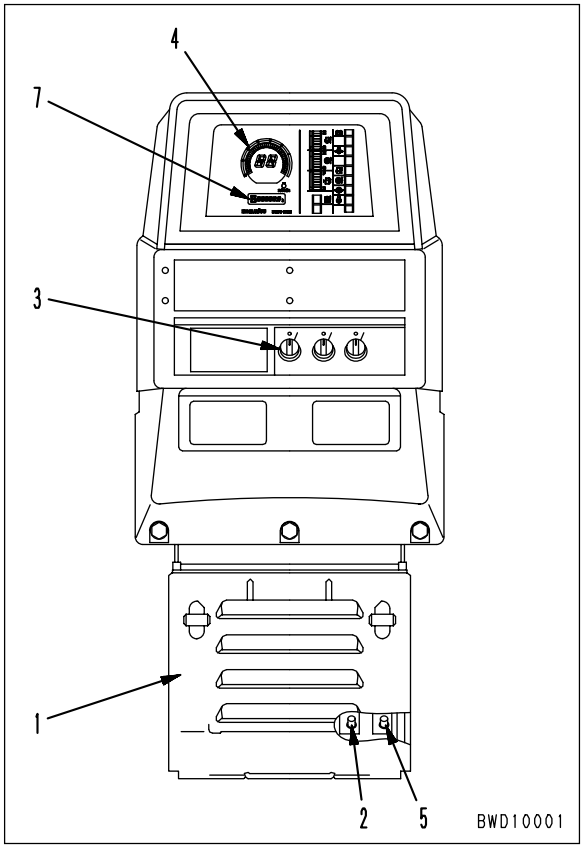
★ When measuring the "stall speed of torque converter" and "speed to stall the torque converter and relieve the work equipment pump", see the measurement procedure for them.

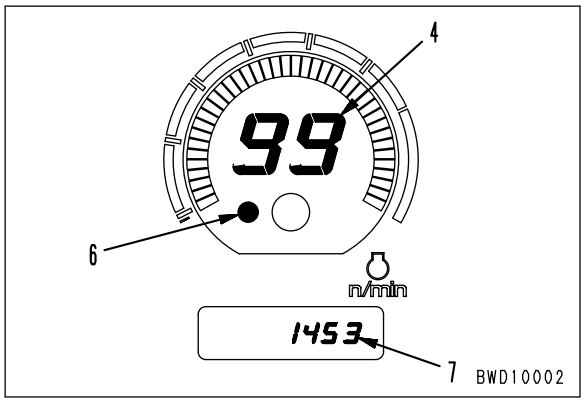


Serial No. 75001 and up

★ Measure the engine speed in the monitoring mode and adjusting mode of the monitor panel. For the general explanation of the monitoring mode and adjusting mode, see DISPLAY AND SPECIAL FUNCTIONS OF MONITOR PANEL in TROUBLESHOOTING.

1. Measuring low idling speed and high idling speed
   1) Remove cover (1).
   2) Turn starting switch ON.
   3) Turn service switch (2) ON.
      ★ The service switch is installed inside the cover.
   4) Turn and hold buzzer cancel switch (3) to the right for at least 7 seconds to display the service mode in upper display unit (4).
   5) Turn up mode selector switch (5) to display the monitoring mode.
      ★ The mode selector switch is installed inside the cover.
      ★ Each time the mode selector switch is turned up, the mode changes.
      ★ If the monitoring mode is selected, round mark (6) on the left side lights up.
   6) Turn buzzer cancel switch (3) to the right to display "99".
   7) Start the engine and read its speed under the following conditions indicated in lower display unit (7) of the panel.
      ★ The engine speed is indicated by the unit of rpm.
      i) Measuring low idling speed:
      Set the joystick and work equipment control lever in neutral and set the fuel control dial in the low idling position.





ii) Measuring high idling speed:
Set the joystick and work equipment control lever in neutral and set the fuel control dial in the high idling position.

8) After measuring the engine speed, turn OFF service switch (2) and set the panel to the ordinary mode.
9) Install cover (1).

Product: KOMATSU D155AX-5 Dozer Bulldozer Service Repair Workshop Manual
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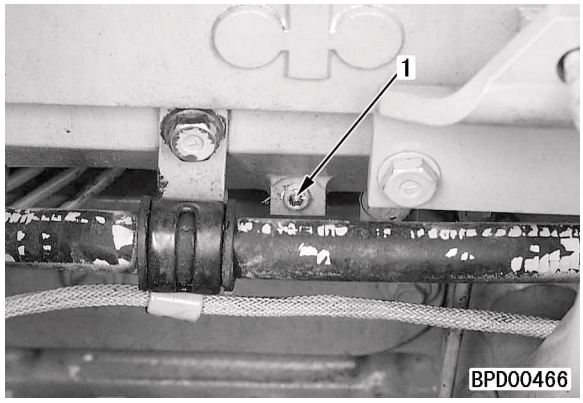
MEASURING INTAKE AIR PRESSURE (BOOST PRESSURE)

Serial No. 70001 – 75000

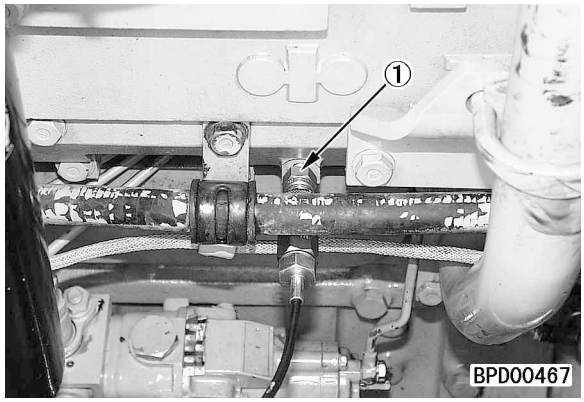
⚠ Be careful not to touch any hot parts when removing or installing the measuring tools.

★ Measure the intake air pressure under the following conditions.
- Coolant temperature: Within operating range
- Transmission oil temperature: Within operating range
- Hydraulic temperature: 45 – 55 °C

1. Remove intake air pressure pickup plug (1) (PT1/8).

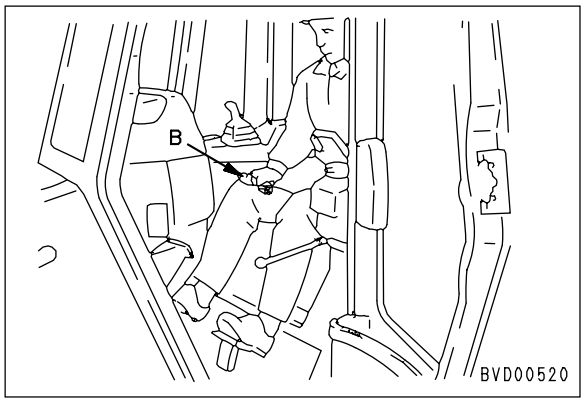


2. Install nipple ① of oil pressure gauge **H1**, then connect to boost gauge **B**.



3. Start and run the engine at a middle or higher speed to drain oil from the hoses.
- ★ Insert the connecting part of the hose in the pressure gauge halfway and open the self-sealing part on the hose side repeatedly to drain the oil.
- ★ If Pm kit (A) is available, the air bleeding coupling (790-261-113) in it may be used.
- ★ If any oil remains in the hoses, the gauge does not operate. Accordingly, drain the oil without fail.

4. Run the engine at high idling and stall the torque converter, and measure the intake air pressure (boost pressure) at this time.
- ★ For the procedure to stall the torque converter, see MEASURING TORQUE CONVERTER STALL SPEED.
- ★ The normal intake air pressure (boost pressure) must be measured while the machine is operating at the rated output. An approximate value can be obtained in the field, however, by measuring when the torque converter stalls.



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