SEBM022210

SHOP MANUAL

KOMATSU®

140-3 SERIES

DIESEL ENGINE

Order the manual at mid-west-tech.com >

CONTENTS

No. of page

01 GENERAL 01-1

11 STRUCTURE AND FUNCTION, MAINTENANCE STANDARD 11-1

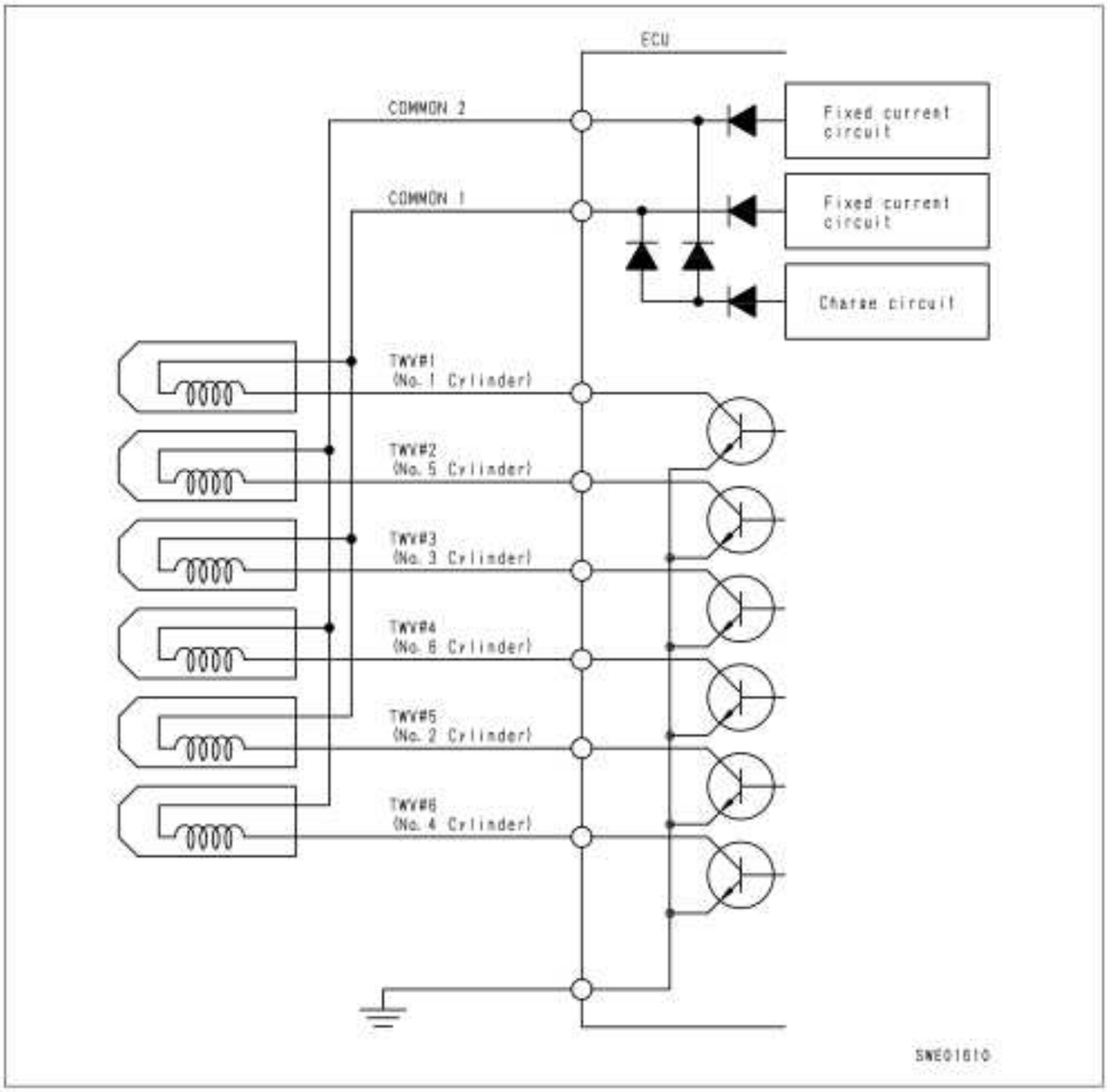
12 TESTING AND ADJUSTING 12-1

13 DISASSEMBLY AND ASSEMBLY 13-1

15 REPAIR AND REPLACEMENT OF PARTS 15-1

MidWestTech | Komatsu 140-3 Series Diesel Engine Service Manual | Publication SE... Order the manual at mid-west-tech.com >

4) Electric circuit diagram



⚠ High voltage (118V) is applied to the wiring harnesses connected to the ECU and EDU COMMON1, COMMON2, and TWV #1 to #6, so be careful to avoid electrocution.

MidWestTech | Komatsu 140-3 Series Diesel Engine Service Manual | Publication SE... Order the manual at mid-west-tech.com >

PERFORMANCE TEST STANDARDS

Engine	Machine model	Test item	Specification value	Speed (rpm)	Dynamometer load (N {kg})
SA6D140E-3	D155AX-5 (110001 – 112349)	Rated horsepower	252 kW/1,900 rpm (Gross) {338 HP/1,900 rpm} (Gross)	1,900 ± 5	1,755 – 1,820 {179 – 186}
		Max. torque	1,635 Nm/1,250 rpm (Gross) {166.7 kgm/1,250 rpm} (Gross)	1,250 ± 50	2,235 – 2,325 {228 – 237}
		High idling speed	2,100 ± 50 rpm	2,100 ± 50	—
		Low idling speed	740^{+25}_{0} rpm	740^{+25}_{0}	—
	D155AX-5 (112350 and up)	Rated horsepower	248 kW/1,900 rpm (Gross) {332 HP/1,900 rpm} (Gross)	1,900 ± 5	1,705 – 1,775 {174 – 181}
		Max. torque	1,635 Nm/1,250 rpm (Gross) {166.7 kgm/1,250 rpm} (Gross)	1,250 ± 50	2,235 – 2,325 {228 – 237}
		High idling speed	2,100 ± 50 rpm	2,100 ± 50	—
		Low idling speed	740^{+25}_{0} rpm	740^{+25}_{0}	—
	PC600-6	Rated horsepower	287 kW/1,800 rpm (net) {385 HP/1,800 rpm} (net)	1,800 ± 5	2,195 – 2,330 {224 – 238}
		Max. torque	1,755 Nm/1,400 rpm (net) {179 kgm/1,400 rpm} (net)	1,400 ± 100	2,460 – 2,620 {251 – 267}
		High idling speed	1,950 ± 50 rpm	1,950 ± 50	—
		Low idling speed	800 ± 25 rpm	800 ± 25	—
	WA500-3	Rated horsepower	235 kW/2,100 rpm (net) {316 HP/2,100 rpm} (net)	2,100 ± 5	1,520 – 1,610 {155 – 164}
		Max. torque	1,370 Nm/1,400 rpm (net) {140 kgm/1,400 rpm} (net)	1,400 ± 50	1,890 – 2,010 {193 – 205}
		High idling speed	2,350 ± 50 rpm	2,350 ± 50	—
		Low idling speed	725 ± 25 rpm	725 ± 25	—
	DCA400SSK (DENYO generator)	Rated horsepower	357 kW/1,800 rpm (Net, 60Hz) {478 HP/1,800 rpm} (Net, 60Hz)	1,800 ± 5 (60Hz)	2,620 – 2,780 (60Hz) {267 – 284} (60Hz)
		Max. torque			
		High idling speed	Max. 1880 rpm (60Hz)	Max. 1,880 rpm (60Hz)	—
		Low idling speed	800^{+50}_{0} rpm	800^{+50}_{0} rpm	—

★ This table shows the standard values using the JIS correction factor.

★ The output and torque values in the table are the standard values with the fan removed, so they are different from the specification values.

★ The table shows the standard values with an air cleaner installed, muffler installed, alternator under no load, and air compressor open (when installed).

★ The dynamometer load shows the value for an arm length of 716 mm.

MidWestTech | Komatsu 140-3 Series Diesel Engine Service Manual | Publication SE... Order the manual at mid-west-tech.com >

3. Points to remember when troubleshooting

1) Points to remember if abnormality returns to normal by itself:
   If the connector is disconnected and the T-adapter is inserted, or if the T-adapter is removed and the connector is returned to its original position when carrying out troubleshooting of the failure, and the error code is no longer displayed, or the [E] for the error code is no longer displayed, the abnormality has probably returned to normal.
   However, there is a high probability that the same problem will occur again, so it is desirable to follow up this problem carefully.
2) Handling error code:
   When carry out troubleshooting after displaying the error codes, save all the errors that have been displayed, then delete them. Following this, try to re-enact the problem and carry out troubleshooting for the error codes that are displayed.
   ★ Among the error codes that are saved, there are some that were caused by mistaken operation or when the connectors were disconnected, so re-enacting the failure prevents time from being wasted on unnecessary checks.
   After completing troubleshooting, erase all the error codes.
3) Handling connectors
   ★ Before starting troubleshooting, check that the connectors related to the error code are properly inserted.
   ★ Always connect any disconnected connectors before going on the next step or after completing troubleshooting.

MidWestTech | Komatsu 140-3 Series Diesel Engine Service Manual | Publication SE...
Order the manual at mid-west-tech.com >