

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.

CONTENTS

	No. of page
01 GENERAL	01-1
10 STRUCTURE AND FUNCTION	10-1
20 TESTING AND ADJUSTING	20-1
30 DISASSEMBLY AND ASSEMBLY	30-1
40 MAINTENANCE STANDARD	40-1
90 OTHERS	90-1

The affected pages are indicated by the use of the following marks. It is requested that necessary actions must be taken to these pages according to the list below.

Mark	Indication	Action required
○	Page to be newly added	Add
●	Page to be replaced	Replace
()	Page to be deleted	Discard

Pages having no marks are not revised at this time.

LIST OF REVISED PAGES

Mark	Pages	Revision number	Mark	Pages	Revision number	Mark	Pages	Revision number	Mark	Pages	Revision number	Mark	Pages	Revision number
●	00- 1	⑤		10- 5	③		10-52			10- 96			10-140	
	00- 2	①		10- 6	③		10-53			10- 97			10-141	
●	00- 2-1	⑤		10- 7			10-54	③		10- 98			10-142	
●	00- 2-2	⑤		10- 8	③		10-56			10- 99			10-143	
●	00- 2-3	⑤		10- 9	③		10-57			10-100			10-144	
●	00- 2-4	⑤		10-10	③		10-58	③		10-101			10-145	
●	00- 2-5	⑤		10-11			10-59			10-102			10-146	
	00- 3			10-12			10-60	③		10-103			10-147	
	00- 4			10-13			10-61			10-104			10-148	
	00- 5			10-14			10-62			10-105	③		10-149	
	00- 6			10-15			10-63			10-106	③		10-150	
	00- 7			10-16	③		10-64			10-107			10-151	
	00- 8			10-17			10-65			10-108			10-152	
	00- 9			10-19			10-66	③		10-109			10-153	
	00-10			10-20			10-67			10-110			10-154	
	00-11			10-21			10-68			10-111			10-156	
	00-12			10-22			10-69	③		10-112			10-157	
	00-13			10-24			10-70			10-113			10-158	
	00-14			10-25			10-71	③		10-114			10-159	
	00-15			10-26			10-72			10-116			10-160	
	00-16			10-27			10-73			10-117			10-161	
	00-17			10-28			10-74			10-118			10-162	
	00-18			10-29			10-75			10-119			10-163	
	00-19			10-30			10-76			10-120			10-164	
	00-20			10-31			10-77			10-121	③		10-165	
	00-21			10-32			10-78			10-122			10-166	
	01- 1			10-34			10-79			10-124			10-167	
	01- 2			10-35			10-80			10-125			10-168	
	01- 3			10-36			10-81			10-126			10-169	
	01- 4	③		10-37			10-82			10-127			10-170	
	01- 5	③		10-38			10-83			10-128			10-171	
	01- 6	③		10-39			10-84			10-129			10-172	
	01- 7	③		10-40			10-85	③		10-130			10-173	
	01- 8	③		10-41			10-86			10-131			10-174	
	01- 9	③		10-42			10-87			10-132			10-175	
	01-10	③		10-43			10-88			10-133			10-176	
	01-11	③		10-44			10-89			10-134			10-177	
	01-12	③		10-46			10-91			10-135			10-178	
	10- 1			10-47			10-92			10-136			10-179	
	10- 2	③		10-48			10-93	③		10-137			10-180	
	10- 3	③		10-49			10-94			10-138			10-181	
	10- 4	③		10-50	③		10-95			10-139			10-182	

Mark	Pages	Revision number	Mark	Pages	Revision number	Mark	Pages	Revision number	Mark	Pages	Revision number	Mark	Pages	Revision number
	10-183			20- 9			20-126			20-219-1	④		20-258	④
	10-184			20- 10			20-127			20-219-2	④		20-259	④
	10-185			20- 11			20-128			20-219-3	④		20-260	④
	10-186	③		20- 12			20-129			20-219-4	④		20-261	④
	10-187			20- 13			20-130			20-219-5	④		20-262	④
	10-188			20- 14			20-131			20-219-6	④		20-301	④
	10-189			20- 15			20-132			20-220			20-302	
	10-189-1	③		20- 16	④		20-133			20-221			20-303	
	10-189-2	③		20- 17	④		20-134			20-222			20-304	
	10-189-3	③		20- 18	④		20-135	④		20-223			20-305	
	10-189-4	③		20- 19	④		20-136	④		20-224			20-306	
	10-190			20- 20	④		20-137			20-225			20-307	
	10-191			20- 21	④		20-138			20-226			20-308	
	10-192			20- 22	④		20-138-1	④		20-227			20-309	
	10-193	③		20-101	④		20-138-2	④		20-228			20-310	
	10-193-1	③		20-102	④		20-138-3	④		20-229			20-311	
	10-194	③		20-103	④		20-139	④		20-229-1	④		20-312	
	10-195	③		20-103-1	④		20-140			20-229-2	④		20-313	
	10-196	③		20-103-2	④		20-140-1	④		20-229-3	④		20-314	
	10-196-1	③		20-104	④		20-140-2	④		20-229-4	④		20-315	
	10-196-2	③		20-104-1	④		20-140-3	④		20-229-5	④		20-316	
	10-196-3	③		20-105	④		20-140-4	④		20-229-6	④		20-317	
	10-197			20-105-1	④		20-141			20-229-7	④		20-318	
	10-198			20-106	④		20-142			20-229-8	④		20-319	
	10-199			20-107	④		20-143			20-229-9	④		20-320	
	10-200			20-107-1	④		20-144			20-230	④		20-321	
	10-201	③		20-108	④		20-145			20-231			20-322	
	10-202			20-109	④		20-146	④		20-231-1	④		20-401	④
	10-203	③		20-109-1	④		20-147			20-231-2	④		20-402	
	10-203-1	③		20-110	④		20-148			20-232	④		20-403	
	10-204	③		20-110-1	④		20-149			20-233			20-404	
	10-205	③		20-111	④		20-150			20-234			20-405	
	10-205-1	③		20-111-1	④		20-151			20-235			20-406	
	10-205-2	③		20-111-2	④		20-152			20-235-1	④		20-407	
	10-206			20-111-3	④		20-153			20-235-2	④		20-408	
	10-207			20-111-4	④		20-154			20-235-3	④		20-409	
	10-208			20-111-5	④		20-155			20-235-4	④		20-410	
	10-209			20-111-6	④		20-156			20-235-5	④		20-411	
	10-210	③		20-112	④		20-157			20-235-6	④		20-412	
	10-211	③		20-112-1	④		20-201	④		20-235-7	④		20-413	
	10-211-1	③		20-112-2	④		20-202			20-235-8	④		20-414	
	10-212	③		20-113			20-203			20-235-9	④		20-415	
	10-213	③		20-113-1	④		20-204			20-235-10	④		20-416	
	10-214	③		20-114	④		20-205			20-235-11	④		20-417	
	10-215	③		20-115	④		20-206			20-235-12	④		20-418	
	10-215-1	③		20-116	④		20-207			20-236			20-419	
	10-216			20-117	④		20-208			20-238	④		20-420	
	10-217			20-117-1	④		20-209			20-239	④		20-421	
	20- 1			20-118	④		20-210			20-240	④		20-422	
	20- 2	④		20-118-1	④		20-211			20-241			20-423	
	20- 2-1	④		20-119			20-212			20-251	④		20-424	
	20- 3	④		20-120			20-214	④		20-252	④		20-425	
	20- 4			20-121			20-215			20-253	④		20-426	
	20- 5			20-122			20-216			20-254	④		20-427	
	20- 6			20-123			20-217			20-255	④		20-428	
	20- 7			20-124			20-218			20-256	④		20-429	
	20- 8	④		20-125			20-219			20-257	④		20-430	

Mark	Pages	Revision number	Mark	Pages	Revision number	Mark	Pages	Revision number	Mark	Pages	Revision number	Mark	Pages	Revision number
	20-431			20-620			20-742	④		20-902	④		30- 8	①
	20-432			20-621			20-743	④		20-903	④		30- 9	①
	20-433			20-622			20-744	④		20-904	④		30- 10	①
	20-434			20-623			20-745	④		20-905	④		30- 11	①
	20-435			20-624			20-746	④		20-906	④		30- 12	②
	20-436			20-625			20-801	④		20-907	④		30- 13	②
	20-437			20-626			20-802	④		20-908	④		30- 14	②
	20-438			20-627			20-803	④		20-909	④		30- 15	②
	20-439			20-628			20-804	④		20-910	④		30- 16	②
	20-440			20-629			20-805	④		20-911	④		30- 17	①
	20-441			20-630			20-806	④		20-912	④		30- 18	①
	20-442			20-632			20-807	④		20-913	④		30- 19	①
	20-443			20-633			20-808	④		20-914	④		30- 20	①
	20-444			20-634			20-809	④		20-915	④		30- 21	①
	20-445			20-635			20-810	④		20-916	④		30- 22	①
	20-446			20-636			20-811	④		20-917	④		30- 23	①
	20-447			20-701	④		20-812	④		20-918	④		30- 24	①
	20-448			20-702	④		20-813	④		20-919	④		30- 25	①
	20-501			20-703	④		20-814	④		20-920	④	●	30- 26	⑤
	20-502			20-704	④		20-815	④		20-921	④	●	30- 27	⑤
	20-503			20-705	④		20-816	④		20-922	④	●	30- 28	⑤
	20-504			20-706	④		20-817	④		20-923	④	●	30- 29	⑤
	20-505			20-707	④		20-818	④		20-924	④	●	30- 30	⑤
	20-506			20-708	④		20-819	④		20-925	④	●	30- 31	⑤
	20-507			20-709	④		20-820	④		20-926	④	●	30- 32	⑤
	20-508			20-710	④		20-821	④		20-927	④	○	30- 32-1	⑤
	20-509			20-711	④		20-822	④		20-928	④	●	30- 33	⑤
	20-510			20-712	④		20-823	④		20-929	④	○	30- 33-1	⑤
	20-511			20-713	④		20-824	④		20-930	④	○	30- 33-2	⑤
	20-512			20-714	④		20-825	④		20-931	④	○	30- 33-3	⑤
	20-513			20-715	④		20-826	④		20-932	④		30- 34	①
	20-514			20-716	④		20-827	④		20-933	④		30- 35	①
	20-515			20-717	④		20-828	④		20-934	④		30- 36	①
	20-516			20-718	④		20-829	④		20-935	④		30- 37	①
	20-517			20-719	④		20-830	④		20-936	④		30- 38	①
	20-518			20-720	④		20-831	④		20-937	④		30- 39	①
	20-519			20-721	④		20-832	④		20-938	④		30- 40	①
	20-520			20-722	④		20-833	④		20-939	④		30- 41	①
	20-601	④		20-723	④		20-834	④		20-940	④	●	30- 42	⑤
	20-602			20-724	④		20-835	④		20-941	④		30- 43	①
	20-603			20-725	④		20-836	④		20-942	④		30- 44	①
	20-604			20-726	④		20-837	④		20-943	④		30- 45	①
	20-605			20-727	④		20-838	④		20-944	④		30- 46	①
	20-606			20-728	④		20-839	④		20-945	④	●	30- 47	⑤
	20-607			20-729	④		20-840	④		20-946	④		30- 48	①
	20-608			20-730	④		20-841	④		20-947	④		30- 49	①
	20-609			20-731	④		20-842	④		20-948	④	●	30- 50	⑤
	20-610			20-732	④		20-843	④		20-949	④		30- 51	①
	20-611			20-733	④		20-844	④		20-950	④		30- 52	①
	20-612			20-734	④		20-845	④		20-951	④		30- 53	①
	20-613			20-735	④		20-846	④	●	30- 1	⑤		30- 54	①
	20-614			20-736	④		20-847	④		30- 2	①		30- 55	①
	20-615			20-737	④		20-848	④		30- 3	①		30- 56	①
	20-616			20-738	④		20-849	④		30- 4	①		30- 57	①
	20-617			20-739	④		20-850	④		30- 5	①		30- 58	①
	20-618			20-740	④		20-851	④		30- 6	①		30- 59	①
	20-619			20-741	④		20-901	④		30- 7	①		30- 60	①

Mark	Pages	Revision number	Mark	Pages	Revision number	Mark	Pages	Revision number	Mark	Pages	Revision number	Mark	Pages	Revision number
	30- 61	①		30-116	①		30-156	①		30-214	①		30-271	①
	30- 62	①		30-117	①		30-157	①		30-215	①		30-272	①
●	30- 63	⑤		30-118	①		30-158	①		30-216	①		30-273	①
	30- 64	①		30-119	①		30-159	①		30-217	①		30-274	①
○	30- 64-1	⑤		30-120	①		30-160	①		30-218	①		30-275	①
○	30- 64-2	⑤		30-121	①		30-161	①		30-219	①		30-276	①
	30- 65	①	●	30-122	⑤		30-162	①		30-220	①		30-277	①
	30- 66	①	●	30-123	⑤		30-163	①		30-221	①		30-278	①
	30- 67	①		30-124	①		30-164	①		30-222	①		30-279	①
	30- 68	①		30-125	①		30-165	①		30-223	①		30-280	①
	30- 69	①		30-126	①		30-166	①		30-224	①		30-281	①
	30- 70	①		30-127	①		30-167	①		30-225	①		30-282	①
	30- 71	①		30-128	①		30-168	①		30-226	①		30-283	①
	30- 72	①		30-129	①		30-169	①		30-227	①		30-284	①
	30- 73	①		30-130	①		30-170	①		30-228	①		30-285	①
	30- 74	①		30-131	①		30-171	①		30-229	①		30-286	①
●	30- 75	⑤		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	⑤		30-175	①		30-233	①		30-290	①
●	30- 79	⑤		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	⑤		30-182	①		30-240	①	●	30-297	⑤
	30- 86	①	●	30-143	⑤		30-183	①		30-241	①		30-298	①
	30- 87	①	●	30-144	⑤		30-184	①		30-242	①	●	30-299	⑤
	30- 88	①	●	30-145	⑤		30-185	①		30-243	①		30-300	①
	30- 89	①	●	30-146	⑤		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	⑤
	30- 93	①		30-146-4	②		30-190	①		30-248	①	●	30-305	⑤
	30- 94	①		30-146-5	②		30-191	①		30-249	①	●	30-306	⑤
	30- 95	①		30-146-6	②		30-192	①		30-250	①	●	30-307	⑤
	30- 96	①		30-146-7	②		30-193	①		30-251	①	●	30-308	⑤
	30- 97	①		30-146-8	②		30-194	①		30-252	①	○	30-309	⑤
	30- 98	①		30-146-9	②		30-195	①		30-253	①		40- 1	③
	30- 99	①		30-146-10	②		30-196	①		30-254	①		40- 2	
	30-100	①		30-146-11	②		30-197	①		30-255	①		40- 3	
	30-101	①		30-146-12	②		30-198	①		30-256	①		40- 4	
	30-102	①		30-146-13	②		30-199	①		30-257	①		40- 6	
	30-103	①		30-146-14	②		30-200	①		30-258	①		40- 7	
	30-104	①		30-146-15	②		30-201	①		30-259	①		40- 8	
	30-105	①		30-146-16	②		30-202	①		30-260	①		40- 10	
	30-106	①		30-146-17	②		30-203	①		30-261	①		40- 11	
	30-107	①		30-147	①		30-204	①		30-262	①		40- 12	
	30-108	①		30-148	①		30-205	①		30-263	①		40- 13	
	30-109	①		30-149	①		30-207	①		30-264	①		40- 14	
	30-110	①		30-150	①		30-208	①		30-265	①		40- 16	③
	30-111	①	●	30-151	⑤		30-209	①		30-266	①		40- 17	
	30-112	①	●	30-152	⑤		30-210	①		30-267	①		40- 18	
	30-113	①	●	30-153	⑤		30-211	①		30-268	①		40- 19	
	30-114	①		30-154	①		30-212	①		30-269	①		40- 20	
	30-115	①		30-155	①		30-213	①	●	30-270	⑤		40- 21	

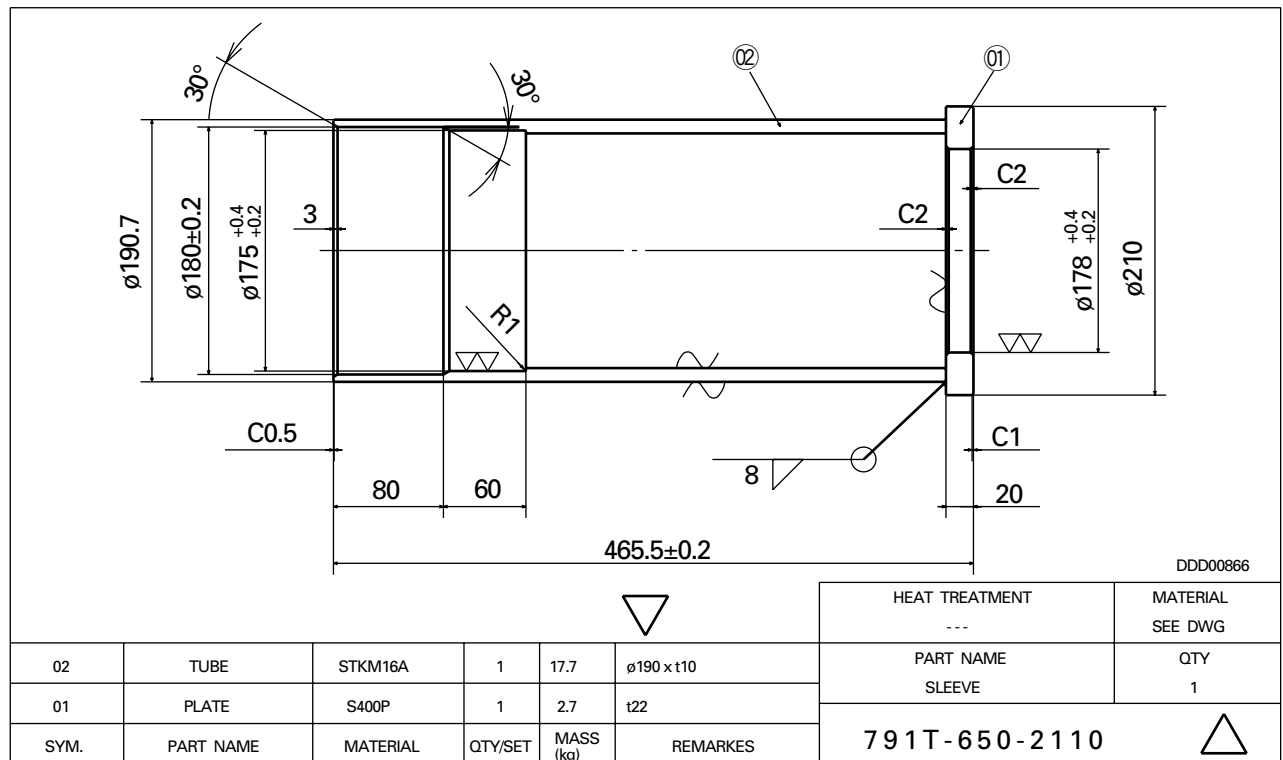
Mark	Pages	Revision number	Mark	Pages	Revision number	Mark	Pages	Revision number	Mark	Pages	Revision number	Mark	Pages	Revision number
	40-22		90- 9		③									
	40-24		90-11		③									
	40-25		90-13		③									
	40-26		90-15		③									
	40-28	③	90-17		③									
	40-29	③	90-19		③									
	40-29-1	③												
	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												
	40-43													
	40-44	③												
	40-46	③												
	40-47													
	40-48	③												
	40-49													
	40-50													
	40-51													
	40-52													
	40-53													
	40-54													
	40-56													
	40-57													
	40-58													
	40-59													
	40-60													
	40-61													
	40-62													
	40-63													
	40-64													
	40-66													
	40-67													
	40-68													
	40-69													
	40-70													
	40-71													
	40-72													
	40-73	③												
	40-74													
	40-75	③												
	40-76													
	40-78													
	40-79													
	90- 1	③												
	90- 3													
	90- 5													
	90- 7	③												

30 DISASSEMBLY AND ASSEMBLY

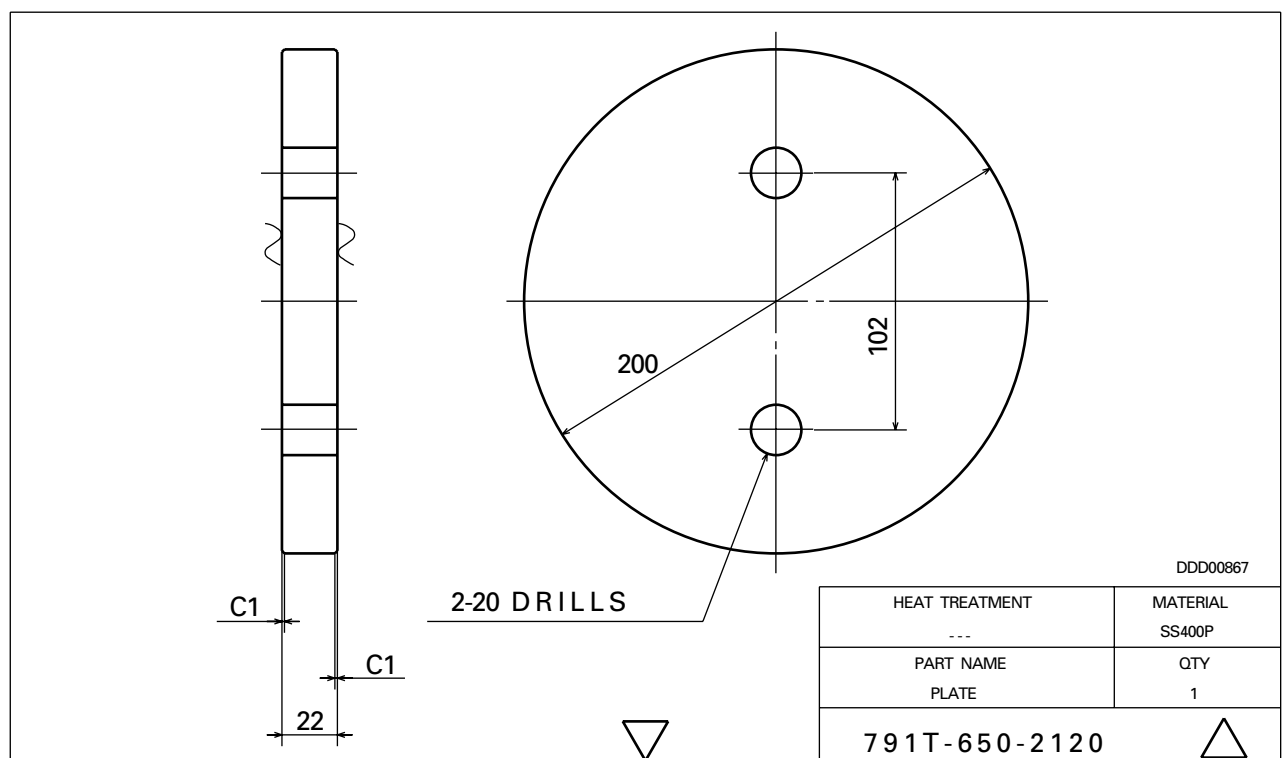
Method of using manual	30- 3	HYDRAULIC COOLER	
Precautions when carrying out operation...	30- 5	Removal and Installation	30-62
Special tool list.....	30- 7	ENGINE	
Special tool sketch	30-17	Removal	30-63
STARTING MOTOR		Installation	30-65
Removal and Installation	30-26	DAMPER	
ALTERNATOR		Removal	30-66
Removal and Installation	30-27	Installation	30-67
ENGINE OIL COOLER CORE		Disassembly	30-68
Removal and Installation	30-28	Assembly	30-71
FUEL INJECTION PUMP		POWER TRAIN UNIT	
Removal	30-29	Removal	30-75
Installation	30-30	Installation	30-79
WATER PUMP		Separation	30-80
Removal and Installation	30-31	Connection	30-84
TURBOCHARGER		PTO	
Removal and Installation	30-32	Disassembly	30-85
NOZZLE HOLDER		Assembly	30-89
Removal and Installation	30-33	TORQUE CONVERTER	
FUEL INJECTOR		Disassembly	30-94
Removal and Installation	30-33-1	Assembly	30-97
ENGINE FRONT SEAL		TORQFLOW TRANSMISSION	
Removal	30-34	Disassembly	30-100
Installation	30-35	Assembly	30-109
ENGINE REAR SEAL		HSS CASE	
Removal	30-37	Disassembly	30-120
Installation	30-38	Assembly	30-129
CYLINDER HEAD		HYDRAULIC PUMP	
Removal	30-42	Removal	30-142
Installation	30-47	Installation	30-146
THERMOSTAT		HSS PUMP	
Removal and Installation	30-49	Disassembly	30-146-1
AIR CONDITIONER COMPRESSOR		Assembly	30-146-8
Removal	30-50	HSS MOTOR	
Installation	30-51	Removal and Installation	30-147
AIR CONDITIONER CONDENSER		POWER TRAIN MAIN RELIEF VALVE	
Removal and Installation	30-52	Removal and Installation	30-148
FUEL TANK		Disassembly and Assembly	30-149
Removal and Installation	30-53	HSS, PPC CHARGE VALVE	
RADIATOR		Removal and Installation	30-150
Removal	30-54	HSS, PCC CHARGEING VALVE	
Installation	30-56	Disassembly	30-151
RADIATOR, OIL COOLER, GUARD		Assembly	30-152
Removal	30-57	TRANSMISSION CONTROL VALVE	
Installation	30-59	Removal	30-153
FAN DRIVE		Installation	30-154
Removal	30-60	Disassembly and Assembly	30-155
Installation	30-61		

BRAKE VALVE		
Removal and Installation	30-157	
Disassembly and Assembly	30-158	
FINAL DRIVE		
Removal	30-160	
Installation	30-162	
Disassembly	30-163	
Assembly	30-168	
TRACK FRAME		
Removal	30-174	
Installation	30-176	
IDLER ASSEMBLY		
Removal	30-177	
Installation	30-178	
Disassembly	30-179	
Assembly	30-181	
RECOIL SPRING		
Removal and Installation	30-184	
Disassembly	30-185	
Assembly	30-190	
TRACK ROLLER		
Removal	30-194	
Installation	30-195	
Disassembly	30-196	
Assembly	30-199	
BOGIE		
Removal	30-202	
Installation	30-204	
Disassembly	30-205	
Assembly	30-209	
CARRIER ROLLER		
Removal and Installation	30-213	
Disassembly	30-214	
Assembly	30-216	
TRACK SHOE		
Checking before removal	30-219	
Removal (normal)	30-219	
Removal (when there is abnormality inside track frame)	30-220	
Installation	30-221	
Overall disassembly	30-222	
Overall assembly	30-227	
Press-fitting jig dimension table for link press	30-241	
ONE LINK		
Disassembly	30-242	
Assembly	30-244	
MASTER LINK		
Disassembly	30-246	
Assembly	30-248	
PIVOT SHAFT		
Removal and Installation	30-251	
EQUALIZER BAR		
Removal	30-252	
Installation	30-253	
EQUALIZER BAR SIDE BUSHING		
Removal and Installation	30-254	
SEGMENT TEETH		
Removal and Installation	30-255	
HYDRAULIC TANK		
Removal and Installation	30-256	
MAIN CONTROL VALVE		
Removal	30-257	
Installation	30-258	
Disassembly	30-259	
Assembly	30-262	
HSS OIL COOLER BYPASS VALVE		
Removal and Installation	30-266	
Disassembly, assembly of HMT oil cooler bypass valve	30-267	
BLADE PPC VALVE		
Removal	30-268	
Installation	30-269	
RIPPER PPC VALVE		
Removal	30-270	
Installation	30-271	
BLADE PPC VALVE		
Disassembly	30-272	
Assembly	30-273	
BLADE LIFT CYLINDER		
Removal and Installation	30-275	
BLADE TILT CYLINDER		
Removal and Installation	30-276	
RIPPER LIFT CYLINDER		
Removal and Installation	30-277	
RIPPER TILT CYLINDER		
Removal and Installation	30-278	
HYDRAULIC CYLINDER		
Disassembly	30-279	
Assembly	30-282	
BLADE		
Removal	30-286	
Installation	30-287	
Disassembly	30-288	
Assembly	30-290	
MULTI-SHANK RIPPER		
Disassembly	30-292	
Assembly	30-294	
ROPS GUARD		
Removal and Installation	30-296	
OPERATOR CAB		
Removal and Installation	30-297	
HOOD		
Removal and Installation	30-298	
FLOOR FRAME		
Removal	30-299	
Installation	30-304	
DASHBOARD		
Removal	30-305	
Installation	30-306	
MONITOR		
Removal and Installation	30-307	
HSS CONTROLLER		
Removal and Installation	30-308	

P Sleeve



P Plate

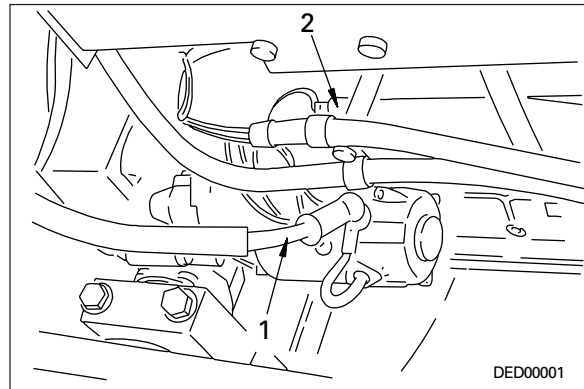


REMOVAL OF STARTING MOTOR ASSEMBLY

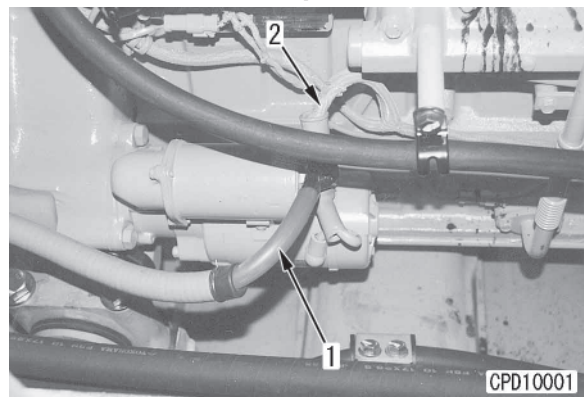
⚠ Disconnect the cable from the negative (-) terminal of the battery.

1. Open engine right side cover (top) and remove cover (bottom).
2. Disconnect 3 starting motor wires (1) and 1 wiring connector (2).
3. Remove 3 bolts, then remove starting motor assembly (3).

Serial 70001 – 75000

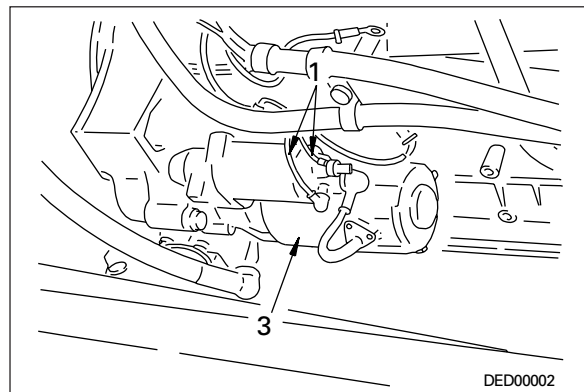


Serial No. 75001 and up



INSTALLATION OF STARTING MOTOR ASSEMBLY

- Carry out installation in the reverse order to removal.

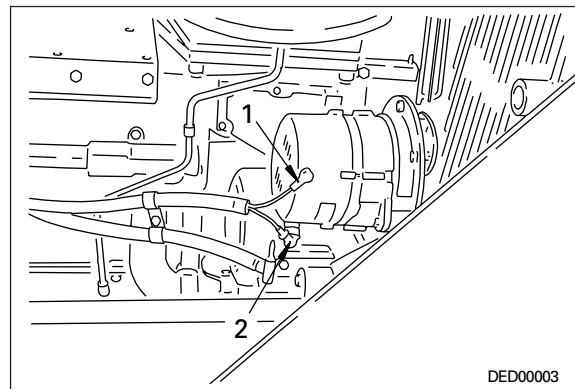


REMOVAL OF ALTERNATOR ASSEMBLY

⚠ Disconnect the cable from the negative (–) terminal of the battery.

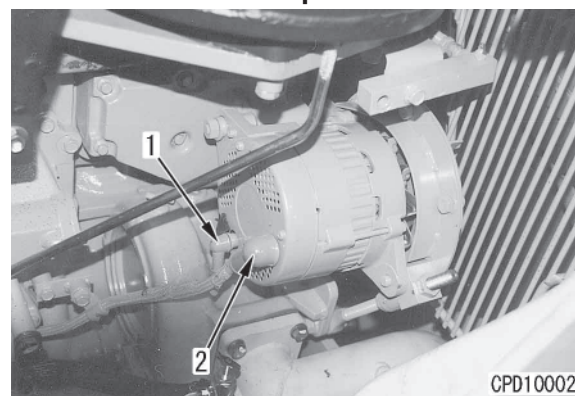
1. Open engine right side cover (top) and remove cover (bottom).
2. Disconnect alternator wiring (1) and (2).

Serial No. 70001-75000



3. Loosen locknut (3), then turn adjustment nut (4) to loosen tension of V-belt (5).
4. Remove bolts (6) and (7), then remove alternator assembly (8) together with belt cover. **※ 1**
 - ★ Remove the V-belt from the pulley when removing the alternator assembly.

Serial No. 75001 and up

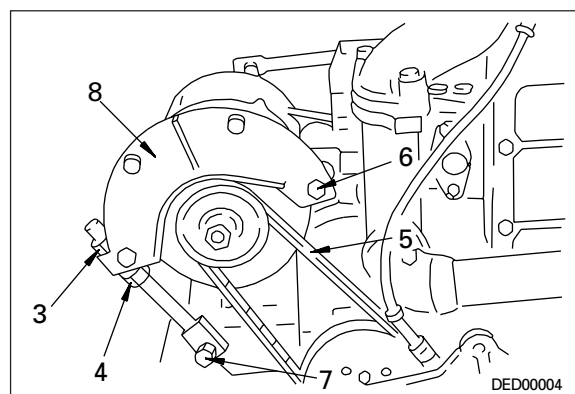


INSTALLATION OF ALTERNATOR ASSEMBLY

- Carry out installation in the reverse order to removal.

※ 1

- ★ After installing the alternator, adjust the belt tension. For details, see TESTING AND ADJUSTING, TESTING AND ADJUSTING ALTERNATOR BELT TENSION.

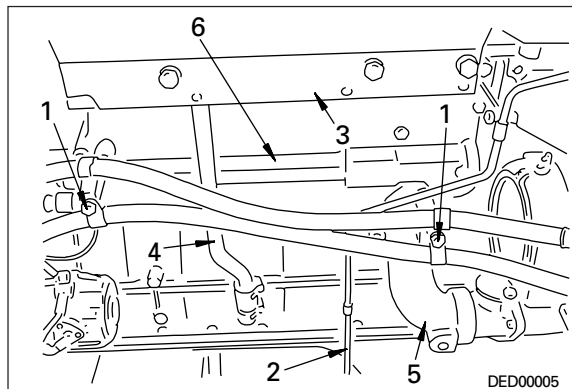


REMOVAL OF ENGINE OIL COOLER CORE ASSEMBLY

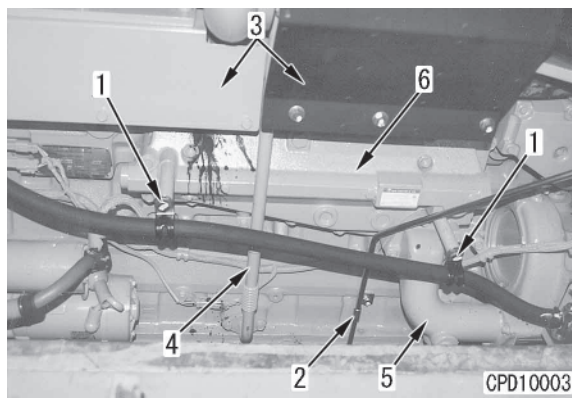
★ Drain coolant.

1. Remove wiring clamp (1).
2. Remove muffler water drain tube (2).
3. Remove adiabatic plate (3).
4. Disconnect turbocharger lubrication tube (4) at turbocharger end, then move it towards rear.
5. Disconnect connector (5).
6. Remove oil cooler assembly (6).
7. Remove core assembly (8) from cover (7).

Serial No. 70001 – 75000

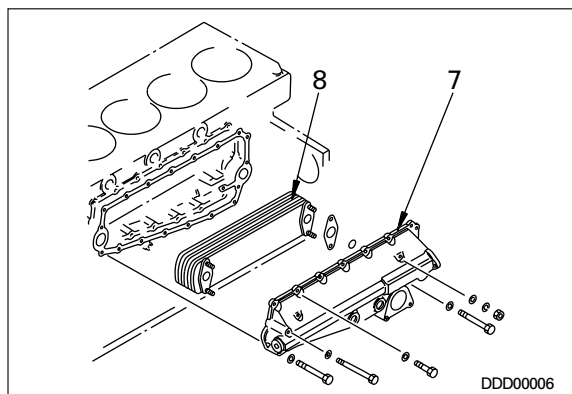


Serial No. 75001 and up



INSTALLATION OF ENGINE OIL COOLER CORE ASSEMBLY

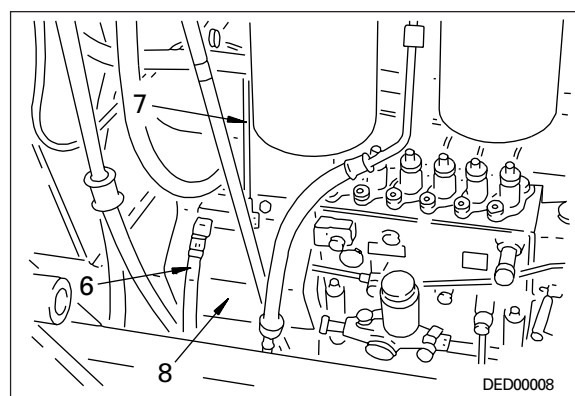
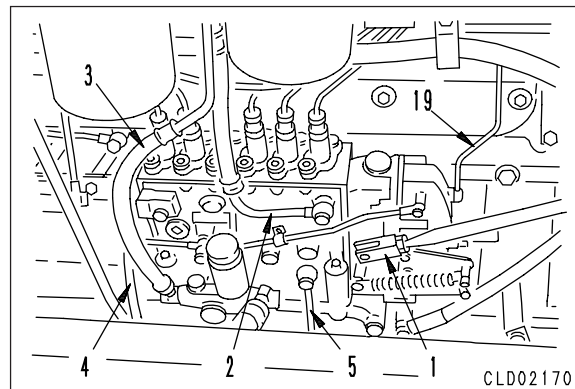
- Carry out installation in the reverse order to removal.
- **Refilling with water**
Add water through water filler to the specified level.
 - ★ Run the engine to circulate the water through the system. Then check the water level again.



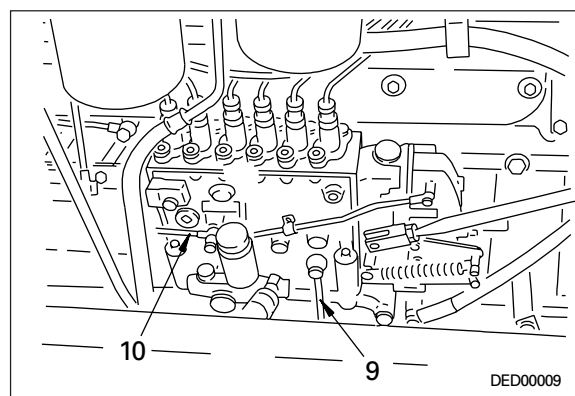
REMOVAL OF FUEL INJECTION PUMP ASSEMBLY

Serial No. 70001 – 75000

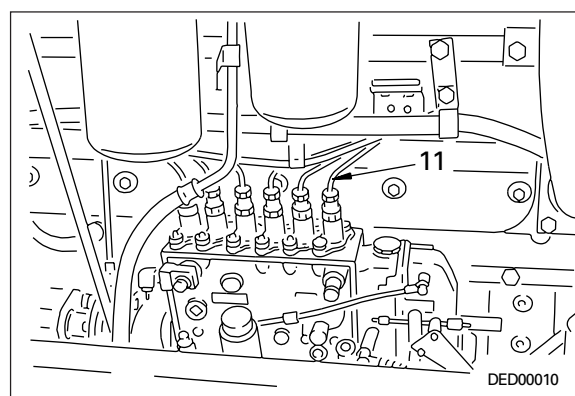
1. Close valve of fuel supply piping.
2. Rotate crankshaft in normal direction and align match mark of fuel injection pump.
★ This makes it easier to check the compression top dead center position of the No. 1 cylinder when installing the fuel injection pump.
3. Open engine left side cover (top) and remove cover (bottom).
4. Disconnect fuel control rod (1), and fuel hoses (2), (3), (4), and (5). ※ 1
5. Remove boost compensator tube (19).
6. Disconnect fuel hose (6) and tube (7).
7. Remove coupling cover (8).



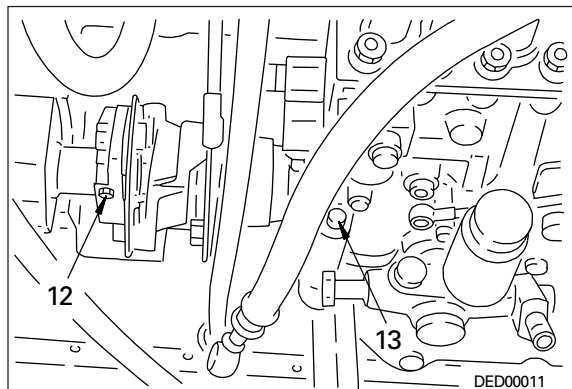
8. Remove lubrication tubes (9) and (10).



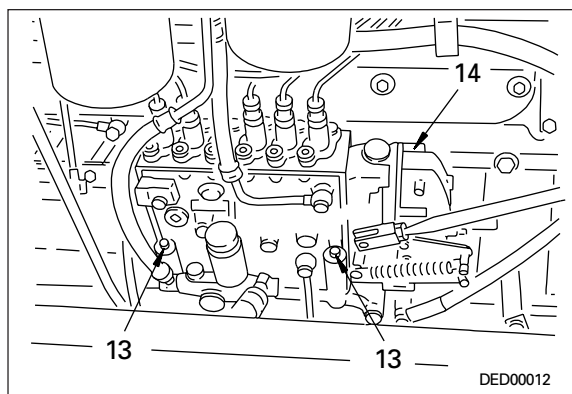
9. Disconnect 6 delivery tubes (11). ※ 2



10. Loosen tightening bolt (12) at drive shaft end, and remove 4 pump mounting bolts (13).



11. Remove fuel injection pump assembly (14) together with coupling. ※ 3



INSTALLATION OF FUEL INJECTION PUMP ASSEMBLY

Serial No. 70001 – 75000

- Carry out installation in the reverse order to removal.

※ 1

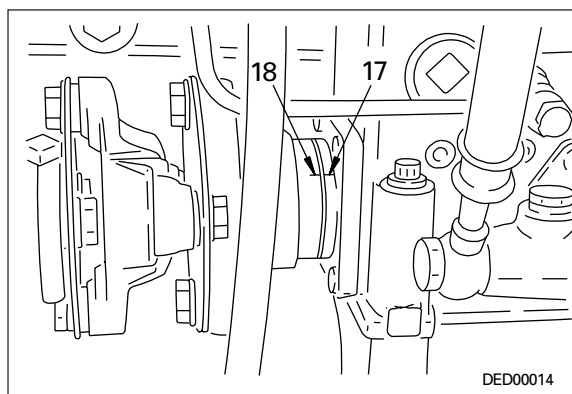
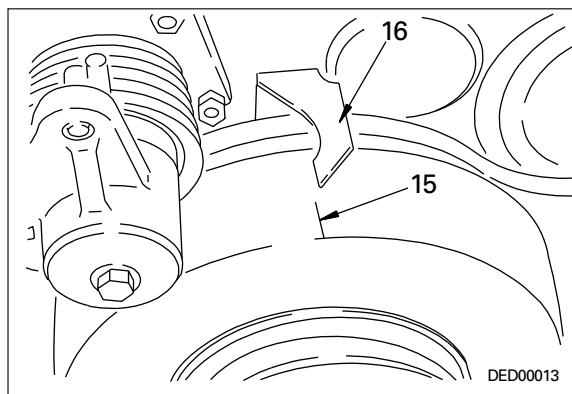
- ★ Adjust the linkage. For details, see TESTING AND ADJUSTING, ADJUSTING FUEL CONTROL LINKAGE.

※ 2

- ★ Sleeve nut: $123.5 \pm 1.0 \text{ Nm}$ $\{2.4 \pm 0.1 \text{ kgm}\}$

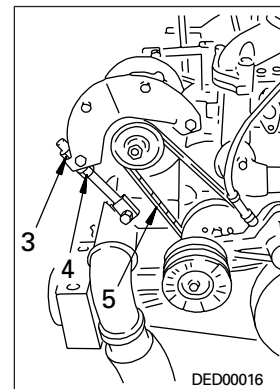
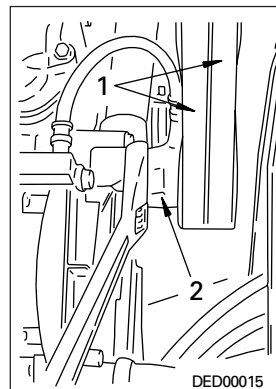
※ 3

- ★ Install the fuel injection pump as follows.
 - After installing pump assembly, align damper (I,J) marks (15) and pointer (16) correctly.
 - Loosen bolt of coupling (18) to align match mark (17) of injection pump.

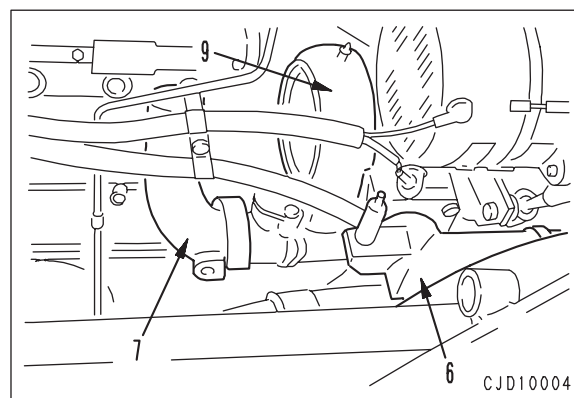


REMOVAL OF WATER PUMP ASSEMBLY

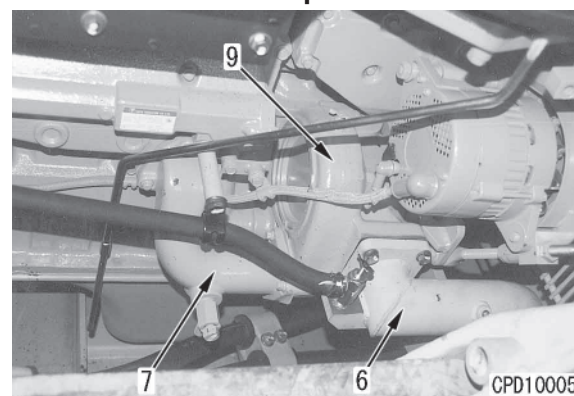
1. Drain coolant.
2. Using an adjustable wrench, push tension pulley (2) of fan belt (1), and remove fan belt.
3. Loosen locknut (3), then loosen adjustment nut (4), and remove V-belt (5). ※ 1
4. Remove connectors (6) and (7).
5. Remove pulley (8).
6. Remove water pump assembly (9).



Serial No. 70001 – 75000



Serial No. 75001 and up

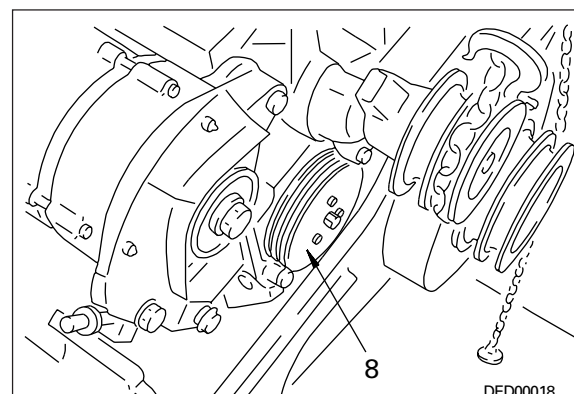


INSTALLATION OF WATER PUMP ASSEMBLY

- Carry out installation in the reverse order to removal.

※ 1

- ★ After installing the V-belt, adjust the belt tension. For details, see TESTING AND ADJUSTING, TESTING AND ADJUSTING ALTERNATOR BELT TENSION.
- **Refilling with water**
Add water through water filler to the specified level.
 - ★ Run the engine to circulate the water through the system. Then check the water level again.



REMOVAL OF TURBOCHARGER ASSEMBLY

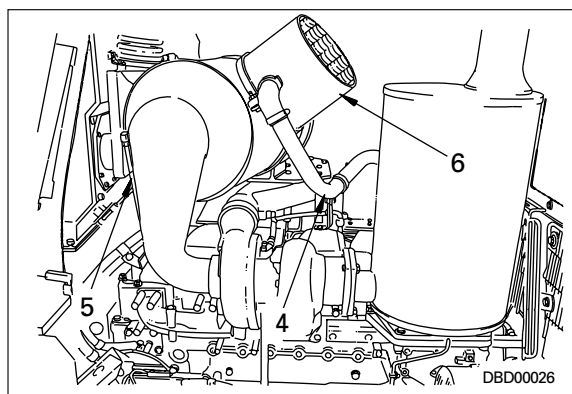
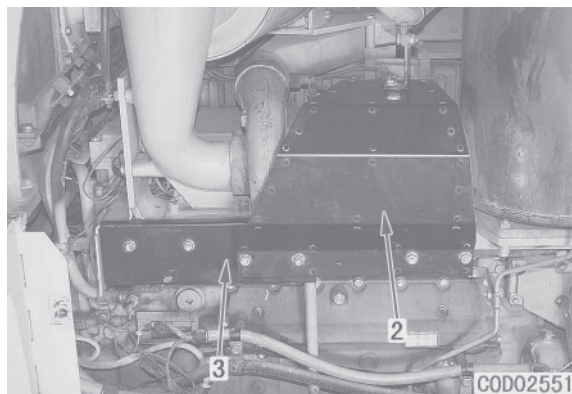
Serial No. 70001 - 75000

1. Remove hood assembly.
For details, see REMOVAL OF HOOD ASSEMBLY.
2. Remove adiabatic covers (2) and (3).
3. Disconnect tube (4) and hose (5), then lift off air cleaner assembly (6).



Air cleaner assembly: **35 kg**

4. Disconnect lubrication hose (7) and drain tube (8). ※ 1
5. Remove turbocharger assembly (9). ※ 2



INSTALLATION OF TURBOCHARGER ASSEMBLY

Serial No. 70001 - 75000

- Carry out installation in the reverse order to removal.

※ 1

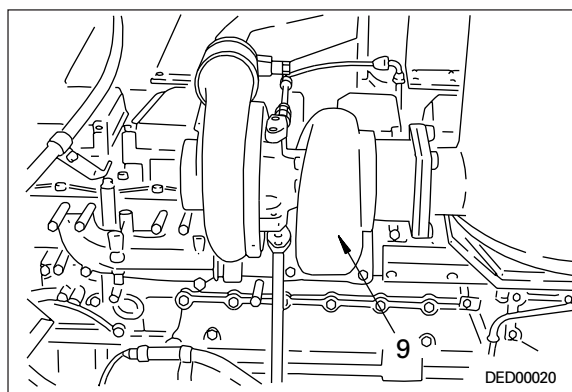
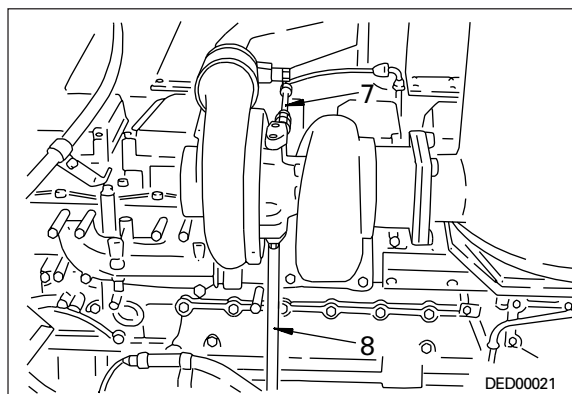


Hose mounting bolt:
 $66.2 \pm 7.4 \text{ Nm}$ { $6.75 \pm 0.75 \text{ kgm}$ }

※ 2



Turbocharger mounting bolt:
 $49.0 \pm 9.8 \text{ Nm}$ { $5 \pm 1 \text{ kgm}$ }



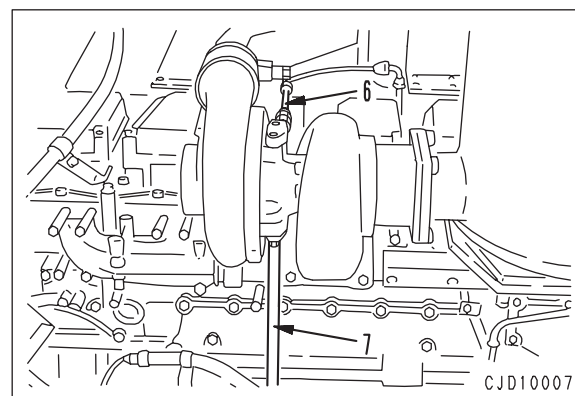
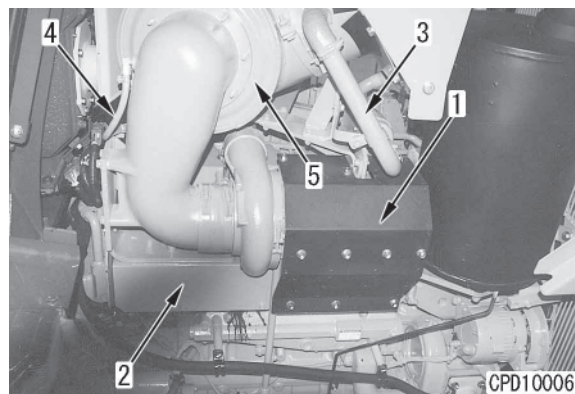
REMOVAL OF TURBOCHARGER ASSEMBLY

Serial No. 75001 and up

1. Remove hood assembly.
For details, see REMOVAL OF HOOD ASSEMBLY.
2. Remove adiabatic covers (1) and (2).
3. Disconnect tube (3) and hose (4), then lift off air cleaner assembly (5).

4 Air cleaner assembly: **35 kg**

4. Disconnect lubrication hose (6) and drain tube (7). ※ 1
5. Remove turbocharger assembly (8). ※ 2



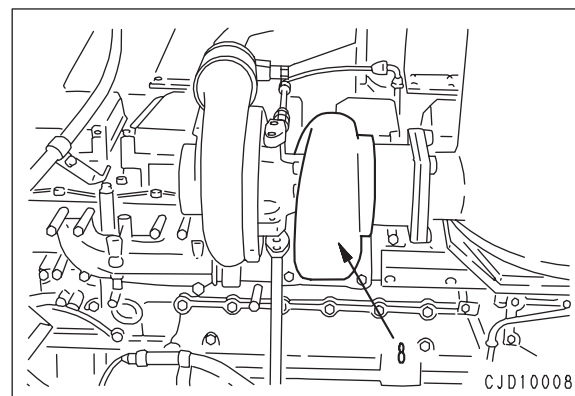
INSTALLATION OF TURBOCHARGER ASSEMBLY

Serial No. 75001 and up

- Carry out installation in the reverse order to removal.

※ 1
3 Hose mounting bolt:
 $66.2 \pm 7.4 \text{ Nm}$ { $6.75 \pm 0.75 \text{ kgm}$ }

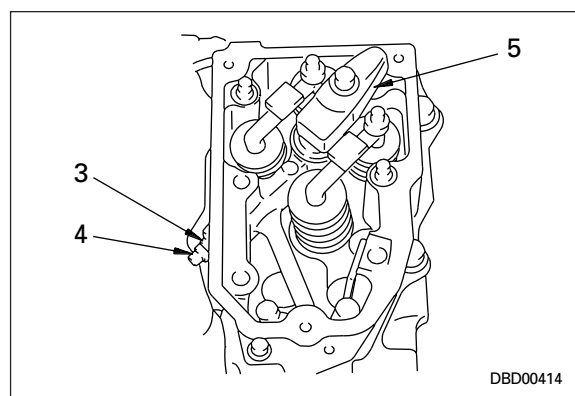
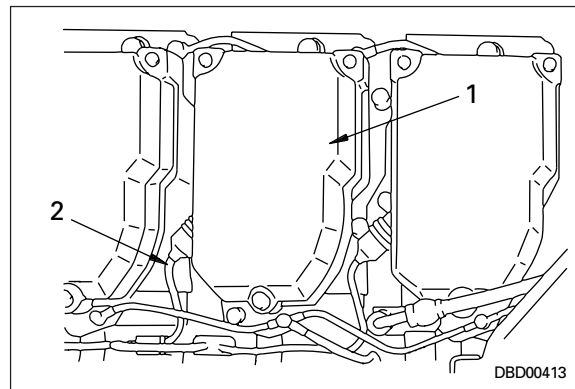
※ 2
3 Turbocharger mounting bolt:
 $49.0 \pm 9.8 \text{ Nm}$ { $5 \pm 1 \text{ kgm}$ }



REMOVAL OF NOZZLE HOLDER ASSEMBLY

Serial No. 70001 – 75000

1. Remove hood assembly.
For details, see REMOVAL OF HOOD ASSEMBLY.
2. Remove cylinder head cover (1). ※ 1
★ For No. 4 and 5 cylinders, remove the air cleaner assembly and air supply connector.
3. Disconnect delivery tube (2). ※ 2
4. Loosen locknut (3), and remove connector (4). ※ 3
5. Remove holder (5). ※ 4
6. Using tool A, remove nozzle holder assembly (6). ※ 5



INSTALLATION OF NOZZLE HOLDER ASSEMBLY

Serial No. 70001 – 75000

- Carry out installation in the reverse order to removal.

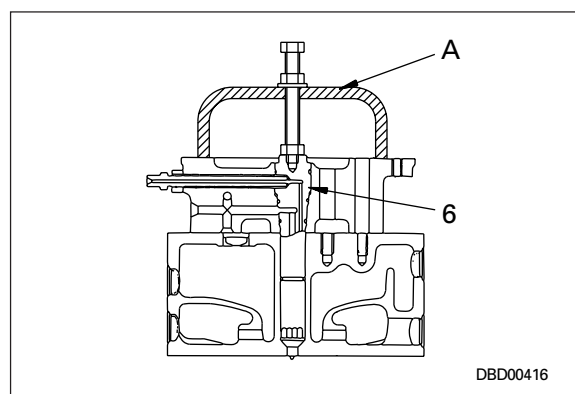
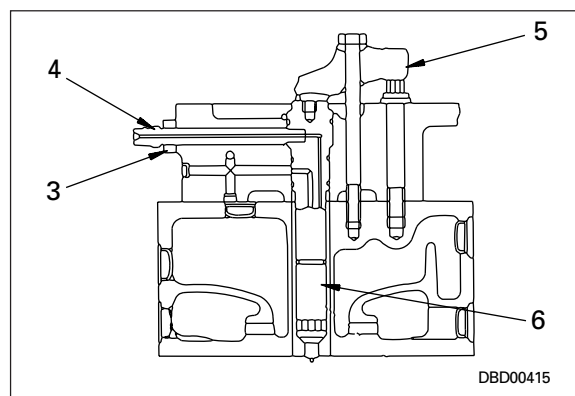
※ 1 **kgm** Cylinder head cover mounting bolt:
 $24.5 \pm 4.9 \text{ Nm}$ { $2.5 \pm 0.5 \text{ kgm}$ }

※ 2 **kgm** Delivery tube sleeve nut:
 $23.5 \pm 0.98 \text{ Nm}$ { $2.4 \pm 0.1 \text{ kgm}$ }

※ 3 **kgm** Connector:
 $31.9 \pm 2.5 \text{ Nm}$ { $3.25 \pm 0.25 \text{ kgm}$ }
 kgm Locknut: **$39.2 \pm 4.9 \text{ Nm}$ { $4.0 \pm 0.5 \text{ kgm}$ }**

※ 4 **kgm** Holder mounting bolt:
 $66.2 \pm 7.4 \text{ Nm}$ { $6.75 \pm 0.75 \text{ kgm}$ }

- ※ 5 ★ When assembling the nozzle holder, clean the nozzle holder mount and check that there is no dirt or dust inside the sleeve before assembling.
Tighten the mounting bolts uniformly in turn to prevent excessive tightening on one side.

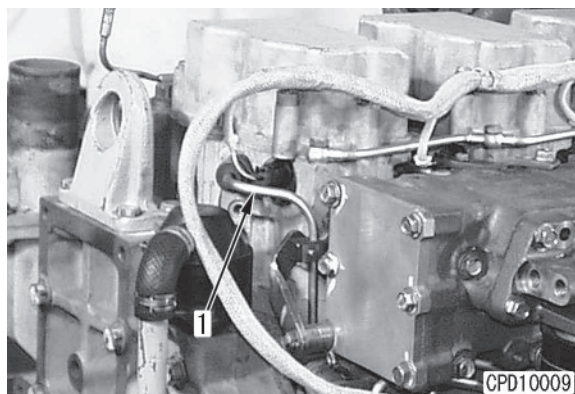


REMOVAL OF FUEL INJECTOR ASSEMBLY

Serial No. 75001 and up

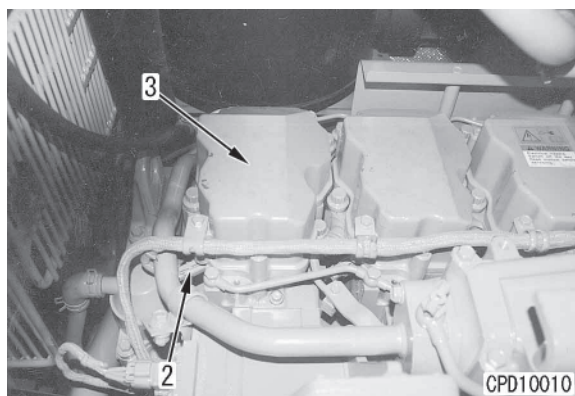
1. Remove hood assembly. For details, see REMOVAL OF HOOD ASSEMBLY.
2. Remove common rail high-pressure pipe (1).

※ 1



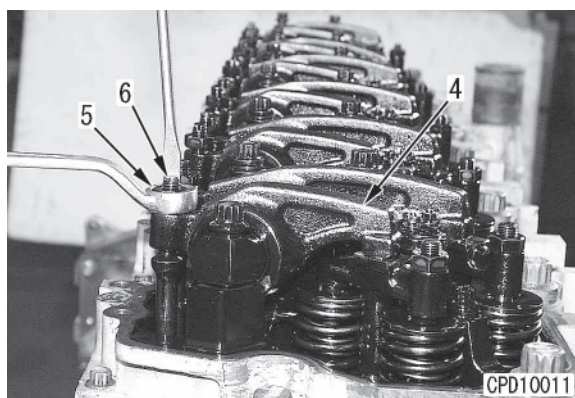
3. Disconnect wiring connector (2).
 - ★ Insert a flat-head screwdriver in the slit of the connector to press the stopper and disconnect the connector.
4. Remove cylinder head cover (3).
 - ★ For Nos. 4 and 5, remove the air cleaner assembly and air intake connector.

※ 2



5. Remove mounting bolts and rocker arm (4).
 - ★ Loosen locknut (5) and then loosen adjustment screw (6) by 2 - 3 turns so that an excessive force will not be applied to the push rod when the rocker arm is installed.

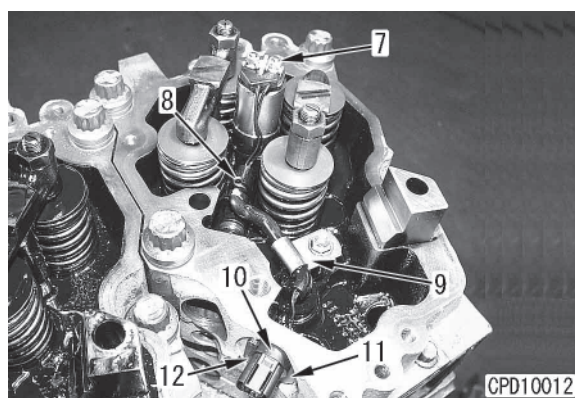
※ 3



6. Remove 2 nuts (7) of solenoid valve above fuel injector.
7. Pull out spring clamp (8) and disconnect clamp (9).
8. Remove mounting bolts (12) of holder (11) of connector (having an O-ring) (10) and to remove holder, then insert connector (10) to remove it.

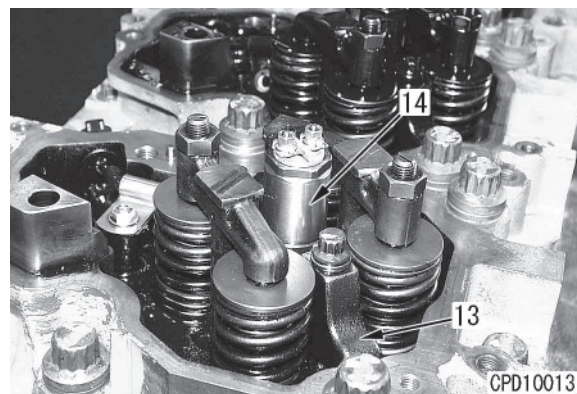
※ 4

※ 4



9. Remove holder (13) of fuel injector, then remove injector assembly (14). ※ 5

★ Do not hold the solenoid of the injector with pliers, etc. to remove the injector.




INSTALLATION OF FUEL INJECTOR ASSEMBLY

Serial No. 75001 and up


- Carry out installation in the reverse order to removal.

※ 1

 High-pressure pipe sleeve nut:
 $39.2 \pm 7.4 \text{ Nm}$ { $4.0 \pm 5.0 \text{ kgm}$ }


- ★ If there is any slit "b" or pit "c" on the taper sealing part (Part "a": The part of 2 mm from the end) of the high-pressure pipe joint or if part "d" (Tape seal end: Part of 2 mm from the end) has level difference that is felt with a nail (or if part "d" is fatigued) and the fuel may leak, replace the high-pressure pipe.

※ 2

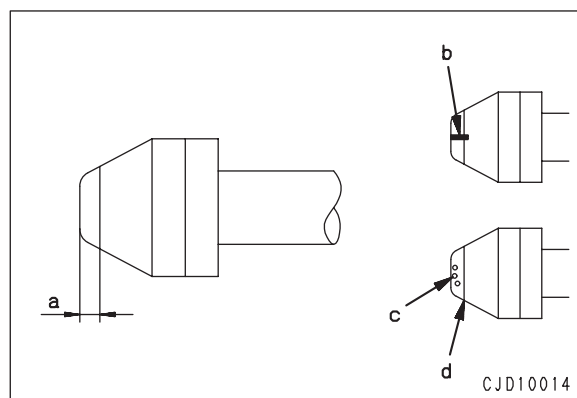
 Cylinder head mounting bolt:
 $29.4 \pm 34.3 \text{ Nm}$ { $3.0 \pm 3.5 \text{ kgm}$ }

※ 3

- ★ When tightening the mounting bolts, check that the ball of the adjustment screw is fitted to the socket of the push rod.

 Rock arm mounting bolt:
 $93 \pm 103 \text{ Nm}$ { $9.5 \pm 10.5 \text{ kgm}$ }

- ★ Adjust the valve clearance. For details, see ADJUSTING VALVE CLEARANCE.



※ 4

★ Method of installing wiring harness.

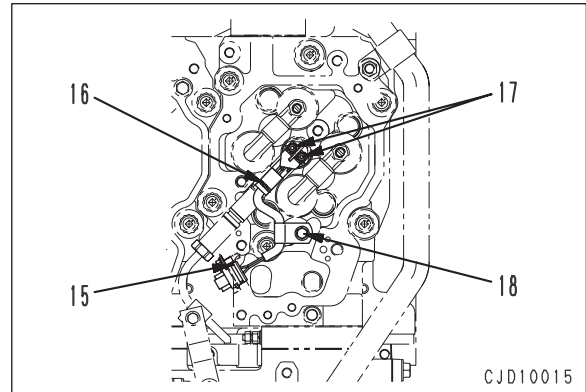
- 1) Fit O-ring (15).
- 2) Install cap (16).
- 3) Tighten nut (14).
- 4) Secure clamp with bolt (18).



Terminal nut:

 $1.8 \pm 2.2 \text{ Nm}$ { $0.18 \pm 0.22 \text{ kgm}$ }

- ★ Eliminate the slack of the wiring harness and press it against the injector body.



CJD10015

※ 5

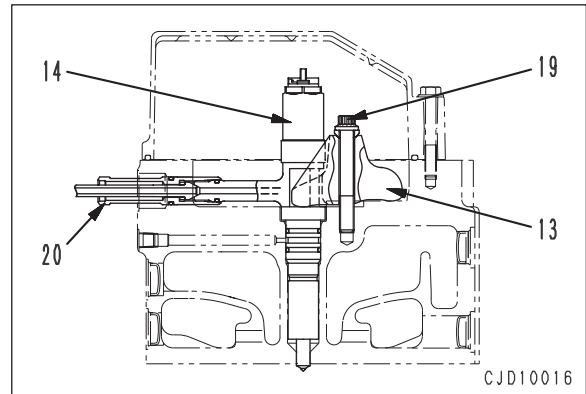
★ Method of installing fuel injector.

- 1) Install fuel injector assembly (14) and holder (13) to the cylinder head temporarily.
- 2) Tighten mounting bolt (19) of holder (13) temporarily.
- 3) Tighten sleeve (20) temporarily.
- 4) Tighten holder mounting bolt (19) securely.
- 5) Tighten sleeve (20) securely.

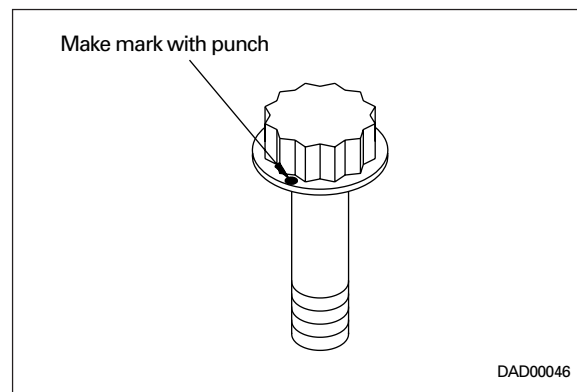
- ★ Apply engine oil to the spherical part of the spherical washer.



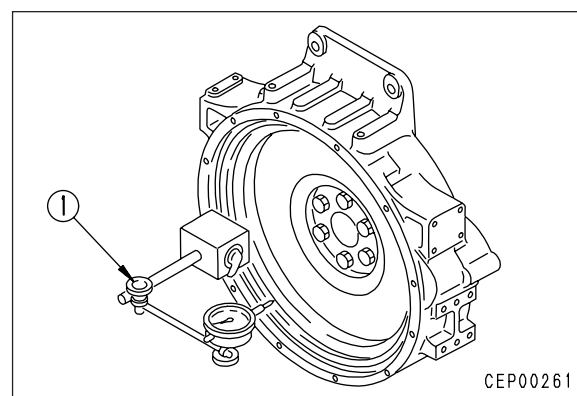
Holder mounting bolt:

 $58.8 \pm 73.5 \text{ Nm}$ { $6.0 \pm 7.5 \text{ kgm}$ }

CJD10016



- ★ After installing the flywheel, use tool ① to measure the face runout and radial runout.
- ★ Face runout: Max. 0.30 mm
- ★ Radial runout: Max. 0.30 mm



REMOVAL OF CYLINDER HEAD ASSEMBLY

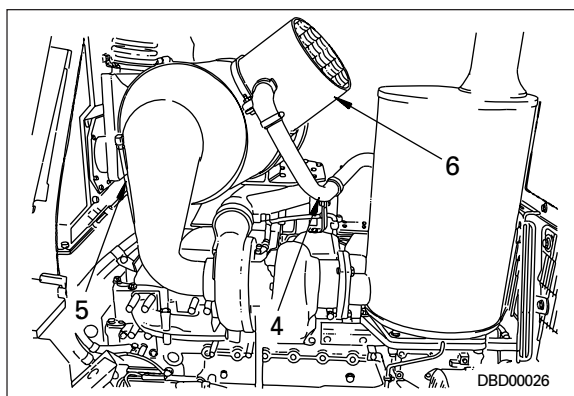
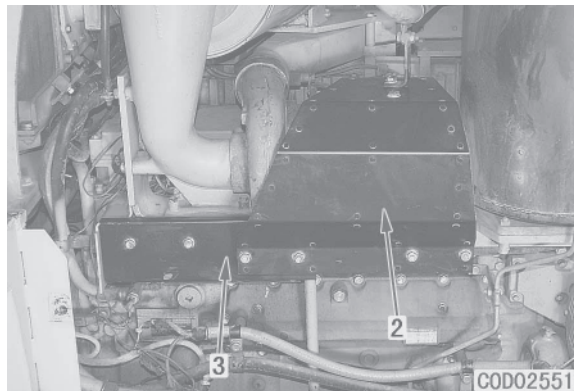
Serial No. 70001 – 75000

⚠ Disconnect the cable from the negative (-) terminal of the battery.

1. Drain coolant.
2. Close fuel supply valve.
3. Remove hood assembly.
For details, see REMOVAL OF HOOD ASSEMBLY.
4. Remove engine side covers (left, right).
5. Remove adiabatic covers (2) and (3).
6. Disconnect tube (4) and hose (5), and lift off air cleaner assembly (6).



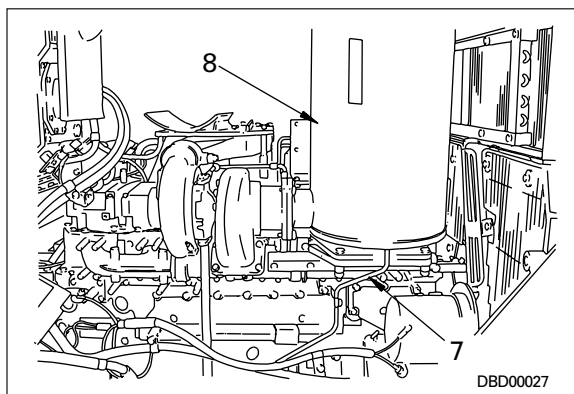
Air cleaner assembly : **35 kg**



7. Remove tube (7), then lift off muffler assembly (8).

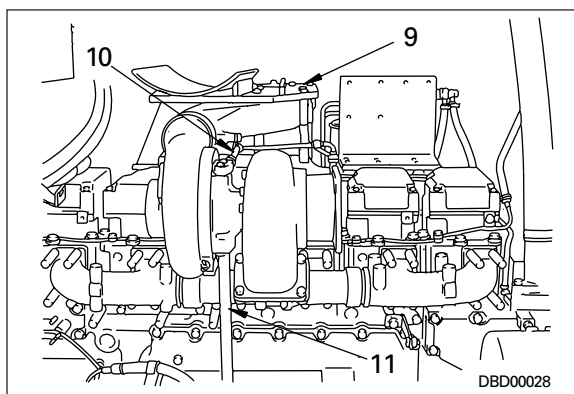


Muffler assembly : **45 kg**



8. Remove bracket (9).
9. Disconnect turbocharger lubrication hose (10) and return tube (11).

※ 1




INSTALLATION OF CYLINDER HEAD ASSEMBLY

Serial No. 70001 – 75000

- Carry out installation in the reverse order to removal.

※ 1

 **Mounting bolt : 66.2 ± 7.4 Nm
{ 6.75 ± 0.75 kgm}**

※ 2

- ★ Tighten the bolts in the order ① - ③ as shown in the diagram on the right, then tighten in the order ④ - ②④.

 **Exhaust manifold mounting bolt :**


1st step : 29.4 ± 4.9 Nm

{ 3.0 ± 0.5 kgm}

2nd step : 66.2 ± 7.4 Nm

{ 6.75 ± 0.75 kgm}

※ 3

 **Joint bolt : 29.4 ± 4.9 Nm
{ 1.15 ± 0.15 kgm}**

※ 4

- ★ Install the hoses without twisting or interference.

 **Joint bolt : 29.4 ± 4.9 Nm
{ 3.0 ± 0.5 kgm}**

※ 5

- ★ Tighten the bolts in the order of ① - ②④ as shown in the diagram on the right.

 **Intake manifold mounting bolt :**


1st step : 29.4 ± 4.9 Nm

{ 3.0 ± 0.5 kgm}


2nd step : 66.2 ± 7.4 Nm

{ 6.75 ± 0.75 kgm}


※ 6

 **Intake connector mounting bolt :
 49.0 ± 9.8 Nm { 5 ± 1 kgm}**


※ 7

 **Joint bolt : 8.8 ± 1.0 Nm
{ 0.9 ± 0.1 kgm}**

※ 8

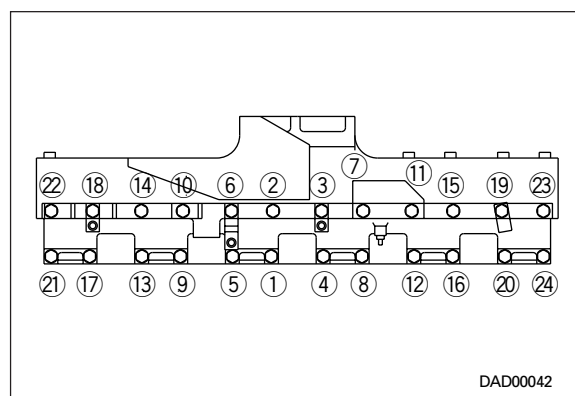
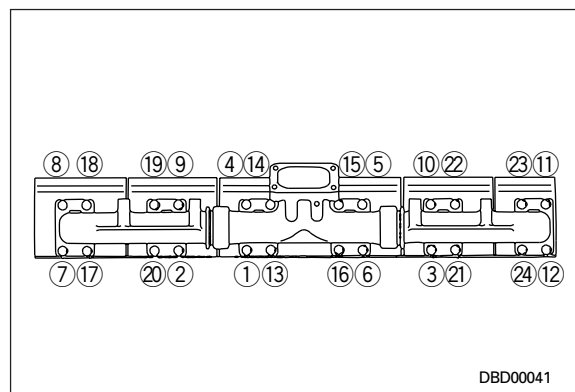
 **Delivery tube sleeve nut :
 23.5 ± 1.0 Nm { 2.4 ± 0.1 kgm}**

※ 9

 **Head cover mounting bolt :
 24.5 ± 9.8 Nm { 2.5 ± 1.0 kgm}**


※ 10


- ★ Clean the mounting bolt oil holes before installing.
- ★ Check that the ball of the adjustment screw is fitted properly into the socket of the push



rod.


- ★ Adjust the valve clearance.
For details, see TESTING AND ADJUSTING, ADJUSTING VALVE CLEARANCE.

 **Rocker arm assembly :
 98 ± 4.9 Nm { 10 ± 0.5 kgm}**


 **Locknut :
 48.0 ± 2.9 Nm { 4.9 ± 0.3 kgm}**

※ 11

- ★ Adjust the crosshead as follows.
 - 1) Loosen locknut, then turn adjustment screw back.
 - 2) Press top of crosshead lightly and tighten adjustment screw.
 - 3) When adjustment screw contacts valve stem, screw in a further 20°.
 - 4) Tighten locknut to hold in position.

 **Locknut : 58.8 ± 5.9 Nm
{ 6.0 ± 0.6 kgm}**

※ 12

 **Locknut : 39.2 ± 4.9 Nm
{ 4.0 ± 0.5 kgm}**

※ 13



Connector : $31.9 \pm 2.5 \text{ Nm}$
 $\{3.25 \pm 0.25 \text{ kgm}\}$

※ 14



Holder mounting bolt : $66.2 \pm 7.4 \text{ Nm}$
 $\{6.75 \pm 0.75 \text{ kgm}\}$

※ 15

- ★ Check that there is no dirt or dust on the cylinder head mounting surface or inside the cylinder.
- ★ When installing the gasket, check that the grommet does not come out.
- ★ Coat the bolt thread and seat face completely with molybdenum disulphide (LM-P).
- ★ Tighten the cylinder head mounting bolts in the order given in the diagram.



Cylinder head mounting bolt :

Anti-friction compound (LM-P)



Cylinder head mounting bolt :

1st step : Tighten to $147 \pm 9.8 \text{ Nm}$
 $\{15 \pm 1 \text{ kgm}\}$

2nd step : Tighten to $215.6 \pm 4.9 \text{ Nm}$
 $\{22 \pm 0.5 \text{ kgm}\}$

- 3rd step :
- 1) When using tool **B**
 - Using an angle tightening wrench, tighten bolt $90^\circ \substack{+30^\circ \\ 0}$.
 - 2) When not using tool **B**
 - Make marks on bolt and fly-wheel with a felt pen, then tighten bolt 90° .

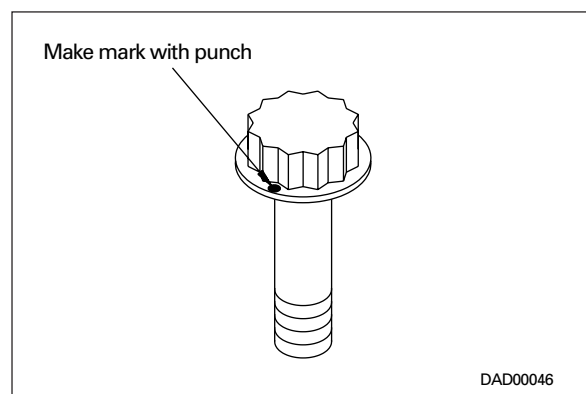
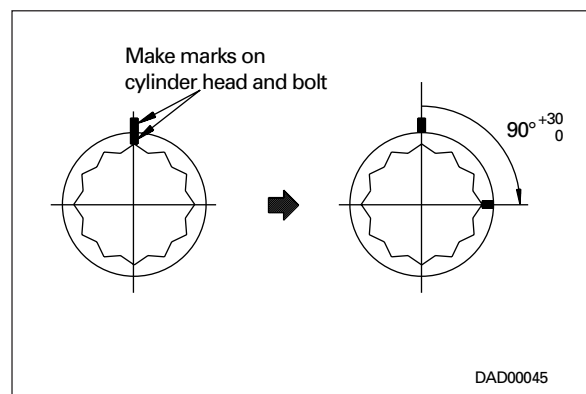
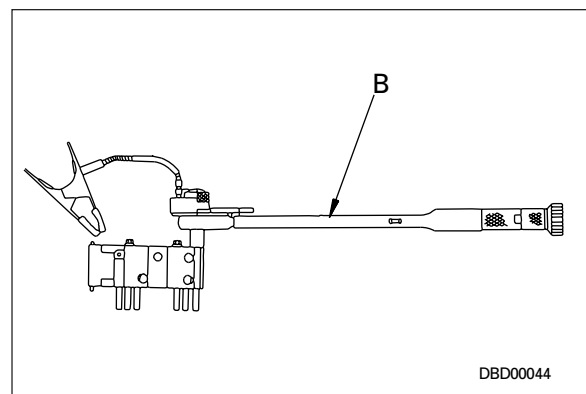
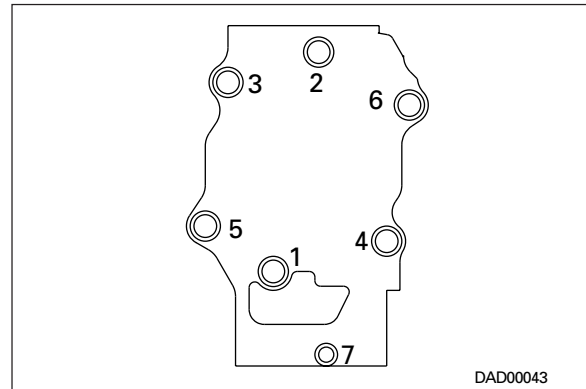
- ★ Tighten bolt ⑦ to $66.2 \pm 7.4 \text{ Nm}$ $\{6.75 \pm 0.75 \text{ kgm}\}$ one time.

- ★ After tightening, make one punch mark on the bolt head to indicate the number of times it has been tightened.

- If any bolt already has five punch marks, do not reuse it. Replace it with a new bolt.

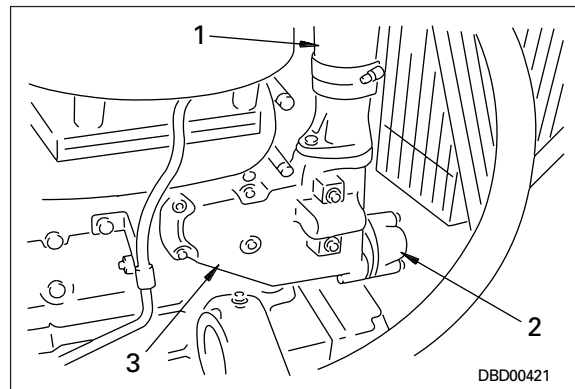
• Refilling with water

- Add water through water filler to the specified level.
- ★ Run the engine to circulate the water through the system. Then check the water level again.



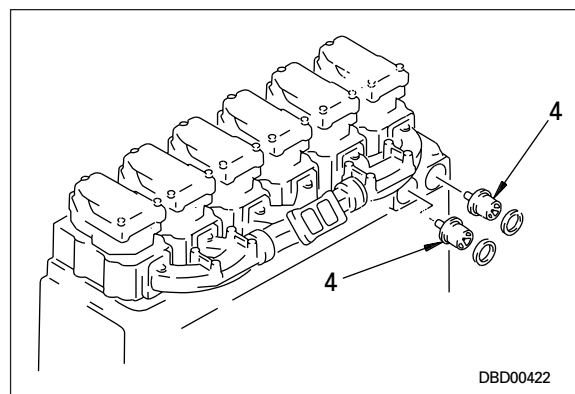
REMOVAL OF THERMOSTAT ASSEMBLY

1. Drain coolant.
2. Remove alternator assembly.
For details, see REMOVAL OF ALTERNATOR ASSEMBLY.
3. Disconnect radiator inlet hose (1).
4. Disconnect bypass tube (2).
5. Remove cover (3).
6. Remove 2 thermostats (4).



INSTALLATION OF THERMOSTAT ASSEMBLY

- Carry out installation in the reverse order to removal.
- **Refilling with water**
Add water through water filler to the specified level.
 - ★ Run the engine to circulate the water through the system. Then check the water level again.

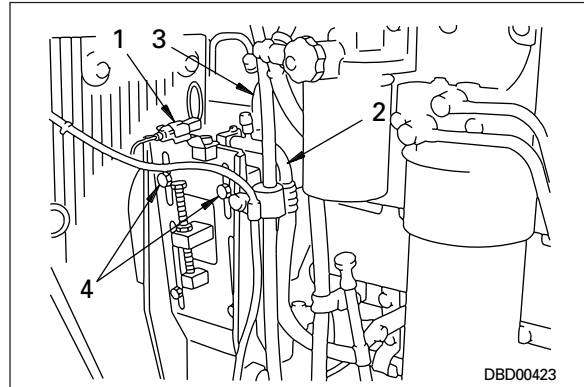


REMOVAL OF AIR CONDITIONER COMPRESSOR ASSEMBLY

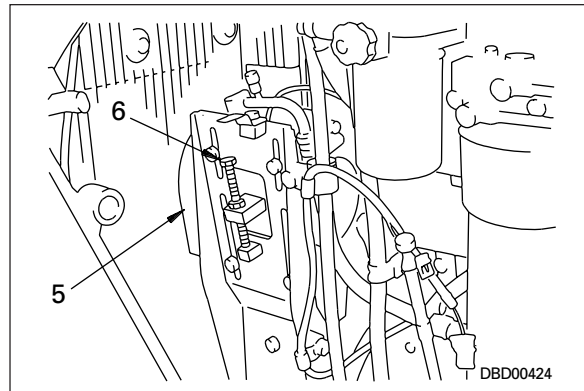
⚠ Using tool X, collect freon gas (R134a).

1. Open engine left side cover (top) and remove cover (bottom).
2. Remove wiring connector (1).
3. Disconnect hoses (2) and (3). ※ 1
★ Fit blind plugs to prevent dirt or water from entering the hoses.
4. Loosen 4 mounting bolts (4).
5. Remove V-belt cover (5).
6. Loosen adjustment bolt (6) and remove.
7. Remove mounting bolts (4), remove V-belt (7) from pulley, then remove compressor assembly (8). ※ 2

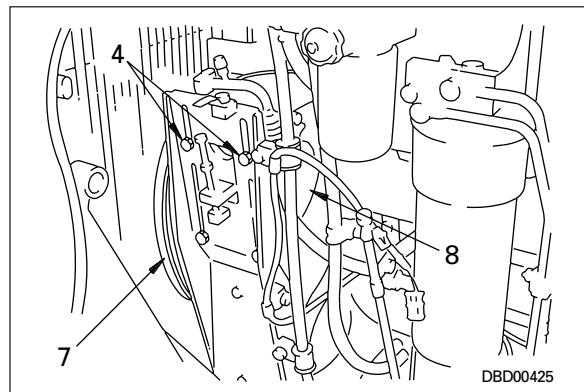
Serial No. 70001 – 75000



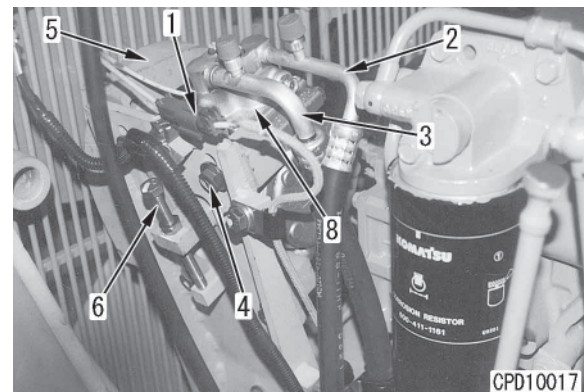
Serial No. 70001 – 75000



Serial No. 70001 – 75000



Serial No. 75001 and up



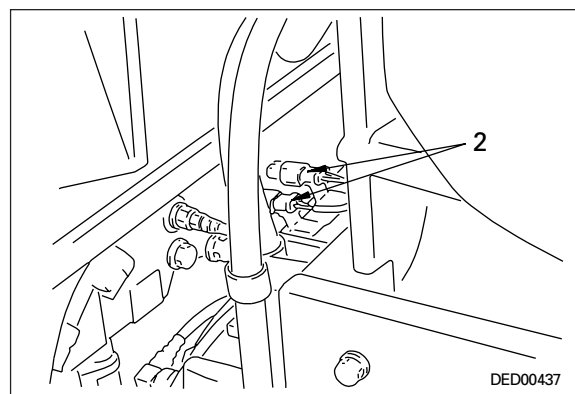
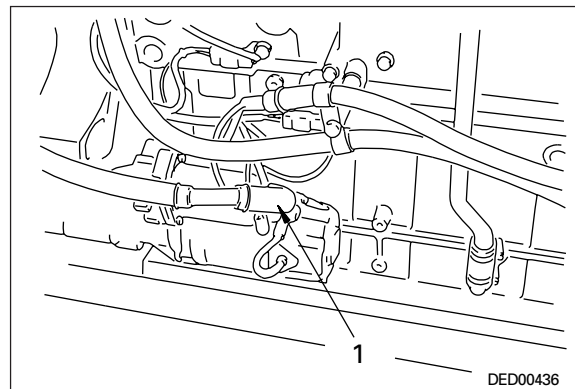
REMOVAL OF ENGINE ASSEMBLY

Serial No. 70001 – 75000

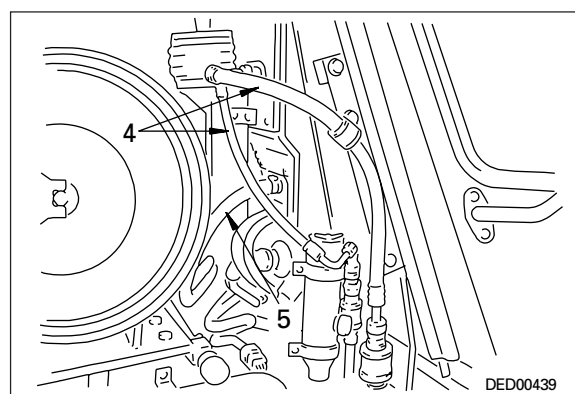
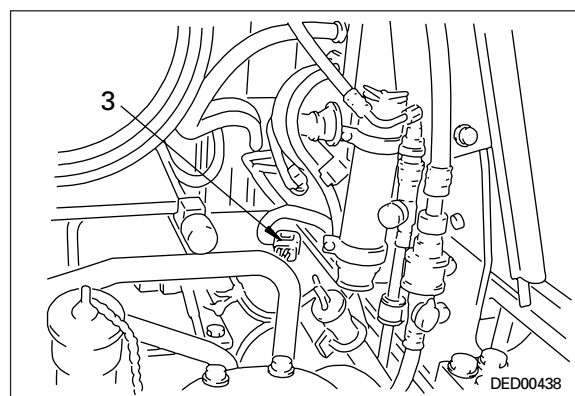
⚠ Disconnect the cable from the negative (–) terminal of the battery.

★ Close the supply valve of the fuel tank.

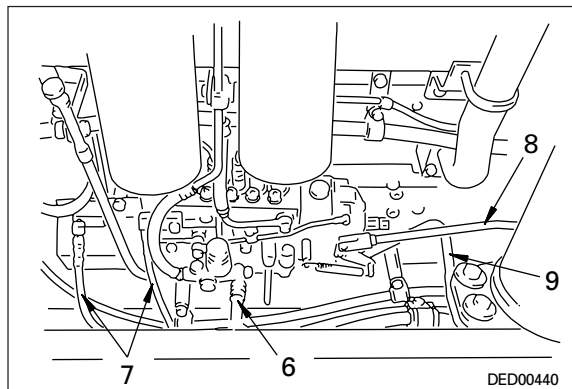
1. Remove radiator, oil cooler, guard assembly.
For details, see REMOVAL OF RADIATOR, OIL COOLER, GUARD ASSEMBLY.
2. Disconnect starting motor wiring (1).
3. Disconnect engine speed sensor connectors (2) (CN009, CN010).



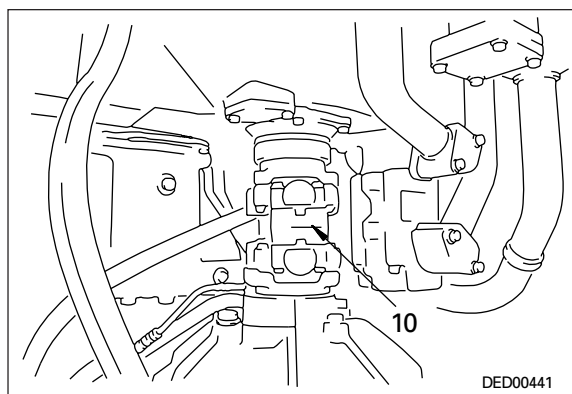
4. Disconnect wiring connector (3) (CN101).
5. Disconnect 2 air conditioner hoses (4). ※ 1
 - ★ Loosen the sleeve nut slightly, and release the air conditioner gas (R134a) completely before disconnecting the hose.
 - ★ Fit blind plugs to prevent dirt or water from entering the hoses.
 - ★ Disconnect at the air conditioner end, then remove all the clamps from the floor frame and move towards the engine.
6. Disconnect 2 heater hoses (5).
 - ★ Disconnect at the air conditioner end, then move towards the engine.



7. Disconnect fuel supply hose (6).
8. Disconnect fuel return hose (7).
9. Disconnect fuel control rod (8).
10. Disconnect ground wiring (9).

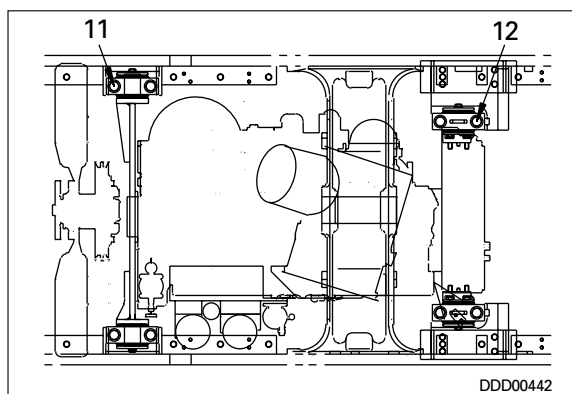


11. Disconnect universal joint (10) at damper end.

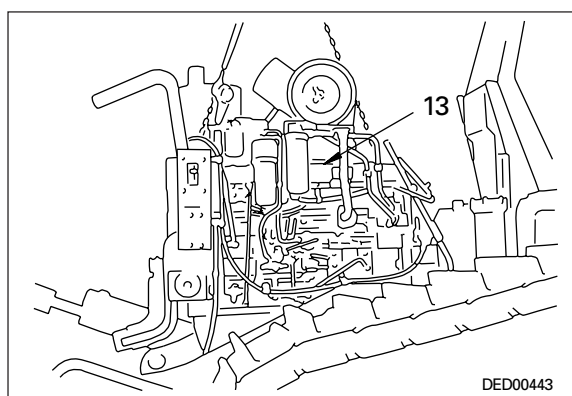


12. Remove front mount bolts (11) and rear mount bolts (12).

※ 2



13. Move engine assembly (13) towards front of machine, and lift off gradually.
 - ★ Be careful not to damage the wiring or hoses when removing the engine assembly.

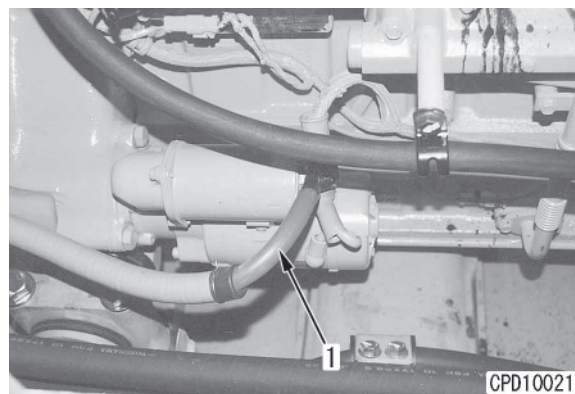
Engine assembly : **1,750 kg**

Serial No. 75001 and up

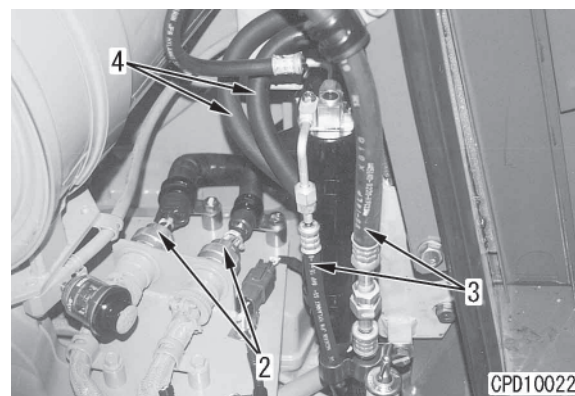
⚠ Disconnect the cable from the negative (-) terminal of the battery.

★ Close the fuel feed valve.

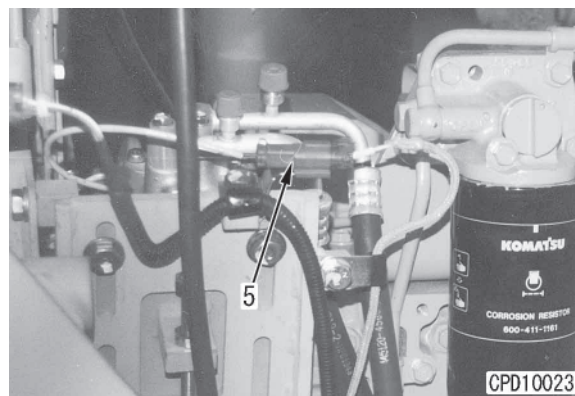
1. Remove radiator and oil cooler and guard assembly. For details, see REMOVAL OF RADIATOR AND OIL COOLER AND GUARD ASSEMBLY.



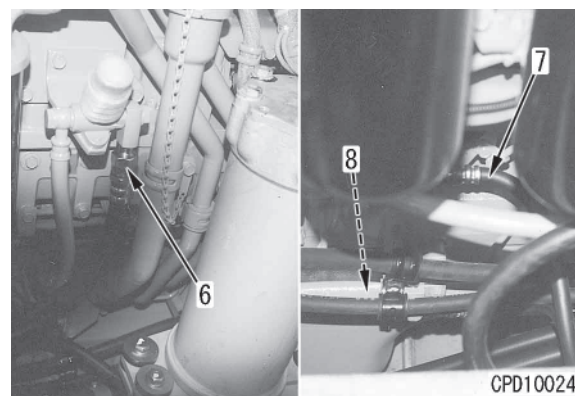
2. Disconnect starting motor wiring (1).
3. Disconnect wiring connector (2).
4. Disconnect 2 air conditioner hose (3). ※ 1
 - ★ Loosen the sleeve nut of each hose a little to discharge the all air conditioner refrigerant (R134a), then disconnect the hose.
 - ★ Plug the hoses to prevent dirt, water, etc. from entering them.
 - ★ Remove the all clamps on the floor frame and move the hoses toward the engine.



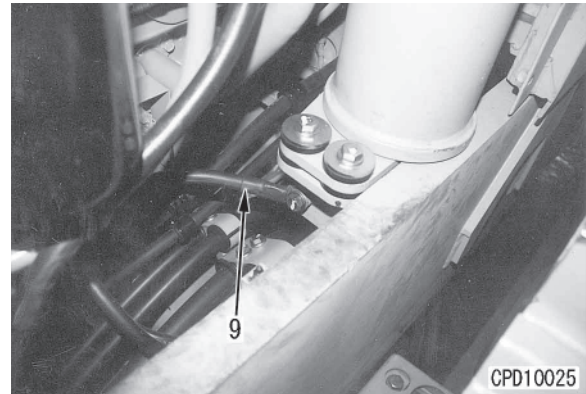
5. Disconnect 2 heater hose (4).



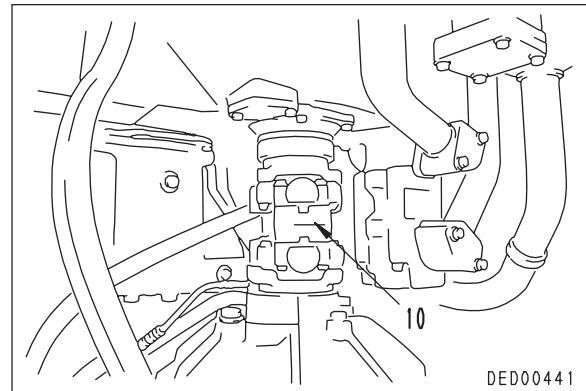
6. Disconnect air conditioner wiring connector (5).
7. Disconnect fuel hoses (6), (7), and (8).



8. Disconnect ground wire (9).

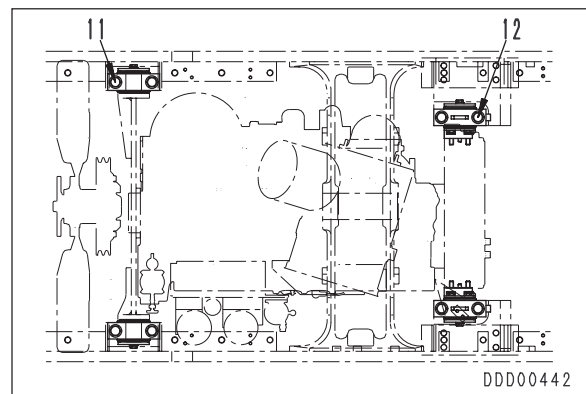


9. Disconnect universal joint (10) from damper.



10. Remove front mounting bolts (11) and rear mounting bolts (12).

※ 2

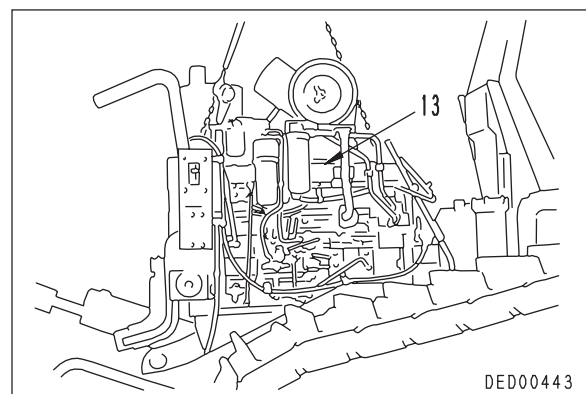


11. Moving engine assembly (13) to front of machine body, lift it off gradually.

★ After removing the engine assembly, take care not to damage the wires, hoses, etc.



Engine assembly : **1,750 kg**



REMOVAL OF POWER TRAIN UNIT ASSEMBLY

Serial No. 70001 – 75000

- ⚠** Park the machine on level ground, lower the work equipment completely to the ground, then disconnect the cable from the negative (-) terminal of the battery.

1. Drain oil



Hydraulic tank : **Approx. 97 ℓ**



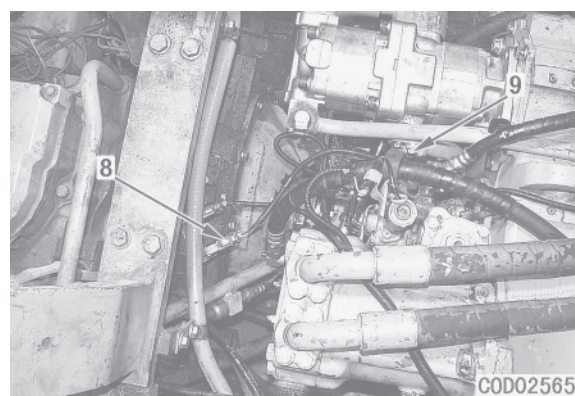
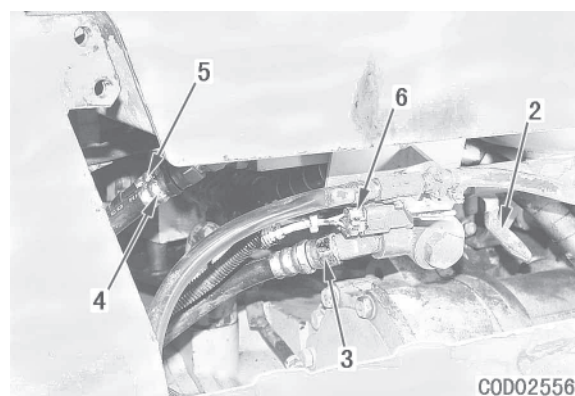
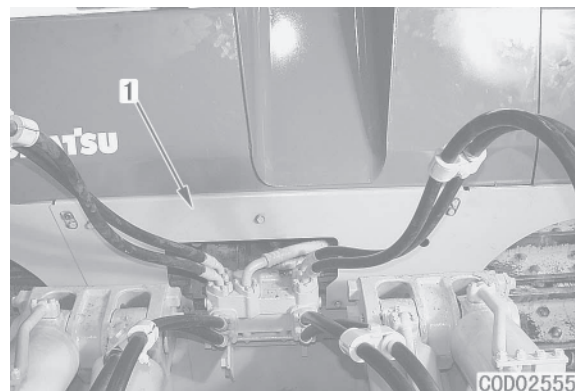
Power train case: **Approx. 60 ℓ**

2. Remove floor frame assembly.
For details, see REMOVAL OF FLOOR FRAME ASSEMBLY.
3. Open bottom plate at bottom of power train unit.
4. Remove cover (1) at bottom of fuel tank.
5. Close lever (2) of fuel valve.
6. Disconnect hose (3) leading to priming pump.
7. Disconnect fuel return hoses (4) and (5).
8. Disconnect fuel level sensor wiring connector (6) (CN422).
9. Lift off fuel tank assembly (7).
 - ★ Sling at three points and use a lever block at the center to keep the tank horizontal.
 - ★ Move the tank to the rear, and when it clears the floor frame, raise the rear of the tank slightly with the lever block. (Do this to avoid interference with the ripper hoses.)

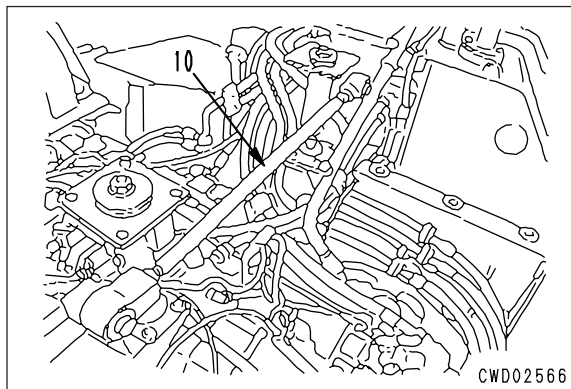


Fuel tank assembly (when full) : **760 kg**

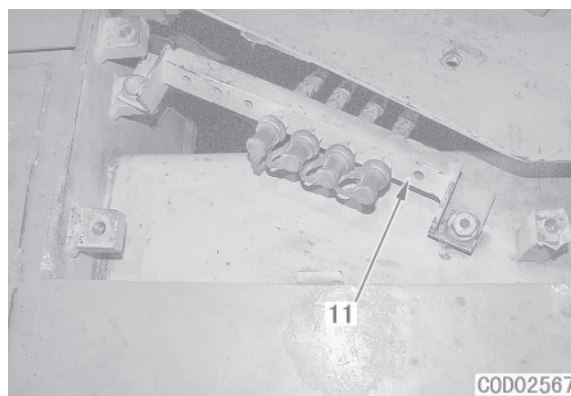
10. Disconnect engine speed sensor wiring connector (8).
11. Disconnect suction tube (9) of 3-spool pump (HSS lubrication, torque converter, transmission charge).
 - ★ Remove the cover at the top of the pump.



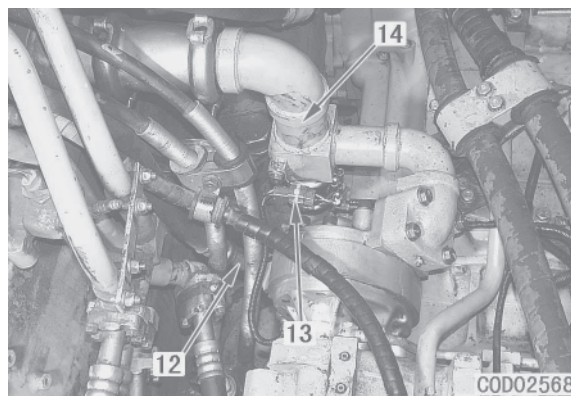
12. Remove suspension rod (10).



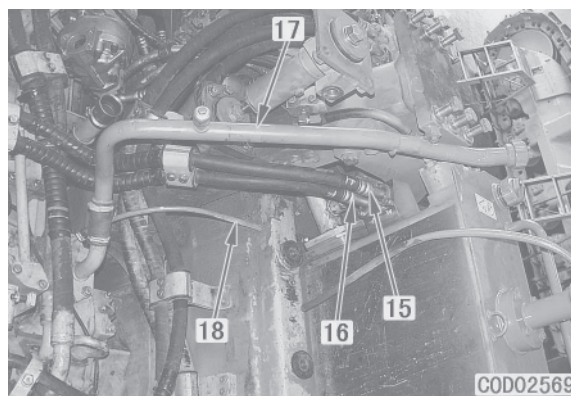
13. Remove top cover of centralized pressure detection port, then remove centralized pressure detection block (11) from frame.



14. Disconnect hose (12) between hydraulic pump and control valve.
15. Disconnect wiring connector (13) (HHP).
16. Remove suction tube (14).
★ Be careful not to damage the gasket of the joint.



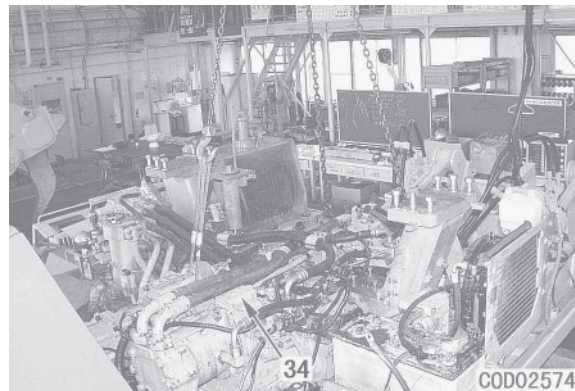
17. Disconnect hose (15) between cooler bypass valve and hydraulic tank.
18. Disconnect hose (16) between charge relief valve and hydraulic tank.
19. Remove power train oil supply pipe (17).
20. Disconnect power train dipstick tube (18) from case, and move towards right side of chassis.



33. Lift off power train unit assembly (34). ※ 5

- ★ Check that the wiring and piping has all been removed, then lift off the power train unit assembly.

4 Power train unit assembly : **2800 kg**




INSTALLATION OF POWER TRAIN UNIT ASSEMBLY


Serial No. 70001 – 75000

- Carry out installation in the reverse order to removal.

※ 1

 **kgm** Universal joint mounting bolt :
110.3 ± 22.1 Nm {11.3 ± 2.3 kgm}


※ 2

 **kgm** Mount cap mounting bolt :
277.5 ± 32.4 Nm {28.3 ± 3.3 kgm}

※ 3

- ★ Clamp the protruding portion of the coupling seal, then assemble the clamp thread so that it is parallel to the cap mount seat surface.

※ 4

 **kgm** Front mount mounting bolt :
926.8 ± 103.0 Nm {94.5 ± 10.5 kgm}

※ 5

- ★ When assembling the power train assembly, be extremely careful not to damage seal (32).

- **Refilling with oil (Hydraulic tank. power train case.)**

Add engine oil through oil filler to the specified level.

- ★ Run the engine to circulate the oil through the system. Then check the oil level again.



Hydraulic tank : **Approx. 97 ℓ**



Power train case : **Approx. 60 ℓ**

SEPARATION OF POWER TRAIN UNIT ASSEMBLY

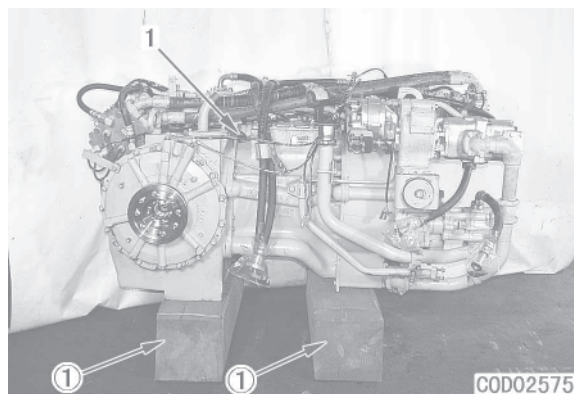
- **Drain oil**

Before setting the power train unit assembly on the block, drain the oil from the PTO case.

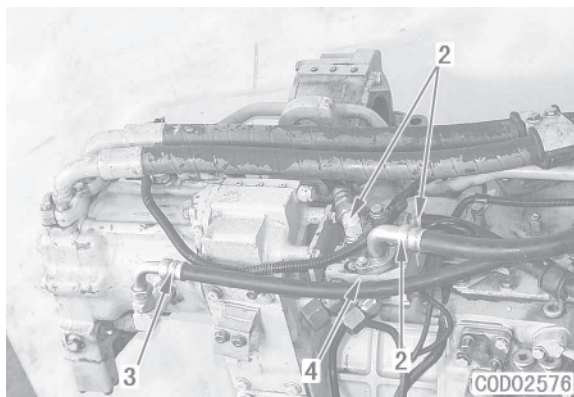
1. Raise power train unit assembly (1) and set on block ①.



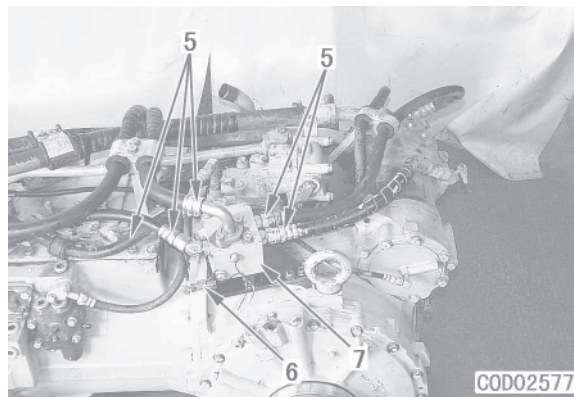
Power train unit assembly : **2800 kg**



2. Disconnect 3 hoses (2) connected to cooler bypass valve.
3. Disconnect HSS pump connecting hose (3).
4. Remove cooler bypass valve assembly (4) together with bracket.



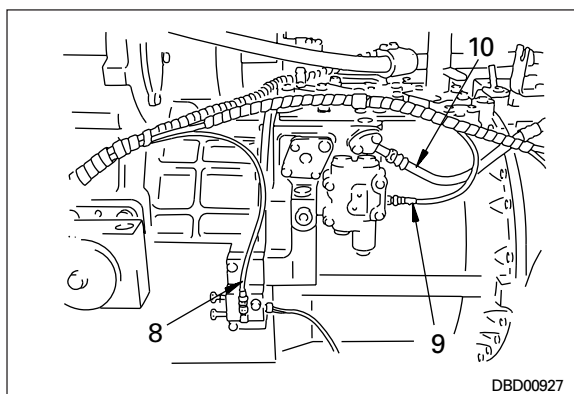
5. Disconnect 5 charge relief valve connecting hoses (5).
6. Disconnect wiring connector (6) (CN406).
7. Remove charge relief valve (7).



8. Disconnect pressure detection hoses (8) and (9), and remove reducing pressure valve hose (10).

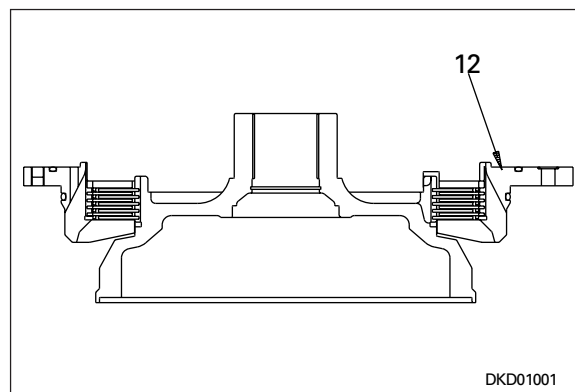
※ 1

★ Disconnect the transmission modulation pressure detection hose.

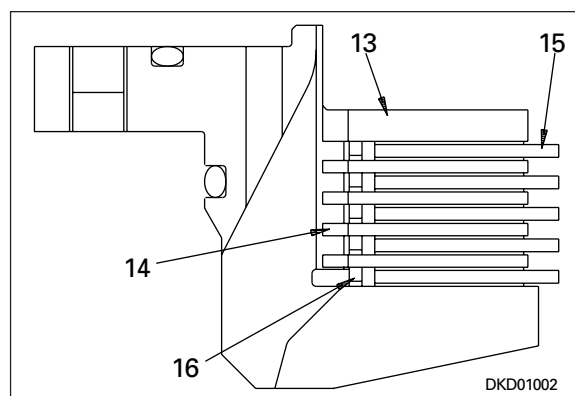


DBD00927

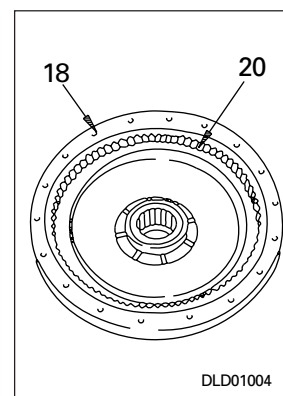
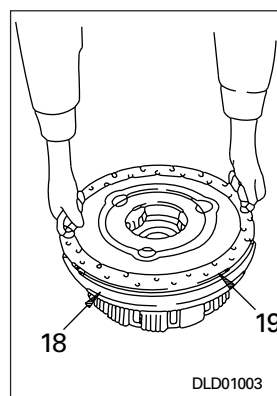
- 4) Remove brake drum (12) together with disc and plate.



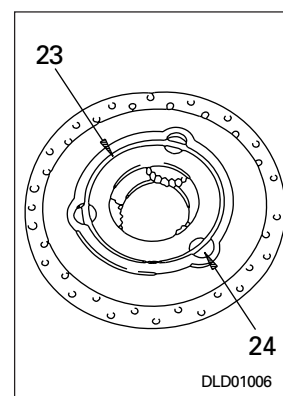
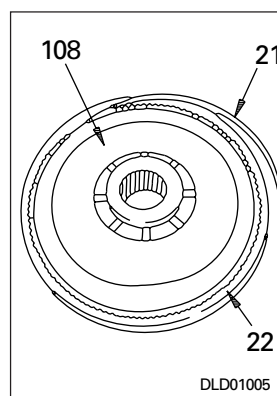
- 5) Remove plate (13), disc (15), spring (16), and plate (14) from brake drum.



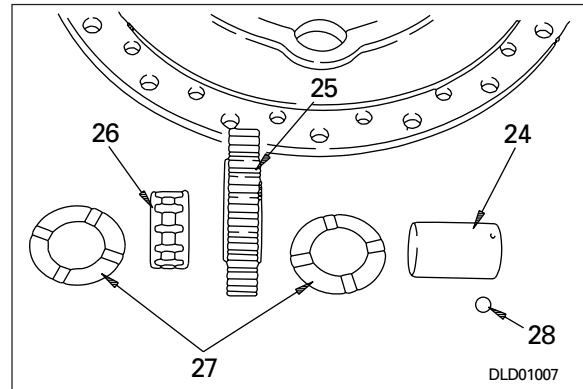
- 6) Remove mounting bolts, then remove carrier assembly (19) from hub (18).
- 7) Remove gear assembly (20) from hub assembly (18).



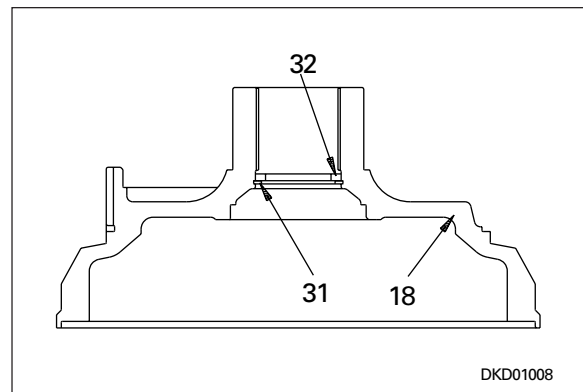
- 8) Remove ring (21), then remove ring gear (22) from gear (108).
- 9) Remove snap ring (23), and pull out shaft (24).



- 10) Remove planetary gear (25), bearing (26), thrust washer (27), shaft (24), and ball (28).

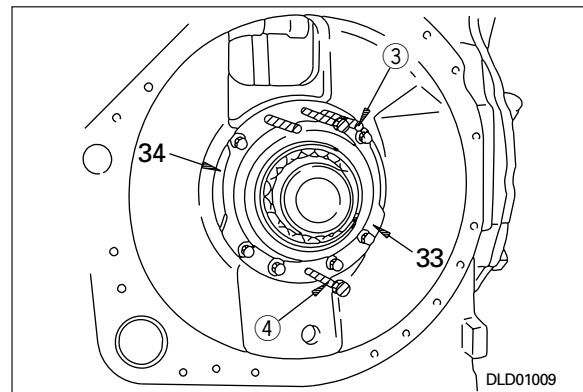


- 11) Remove snap ring (31), then remove stopper (32) from hub (18).

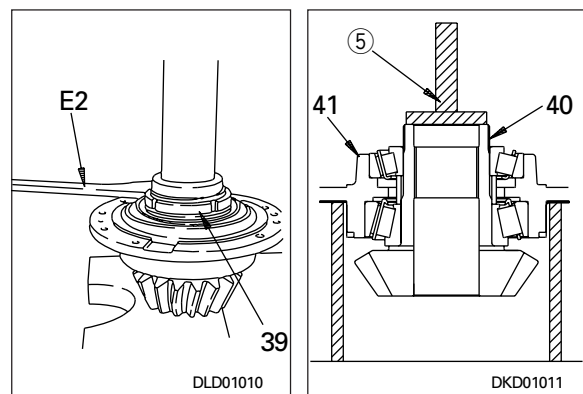


2. Bevel pinion assembly

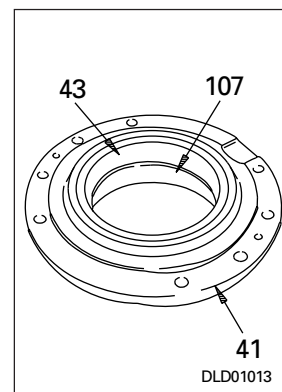
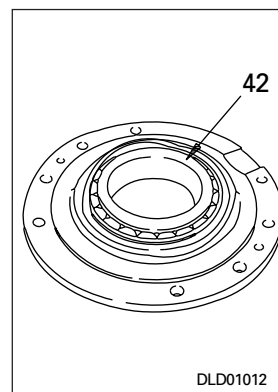
- 1) Using guide bolts (3) and forcing screws remove bevel pinion assembly (33) and shim (34).
- ★ Check the number and thickness of the shims, and keep in a safe place.



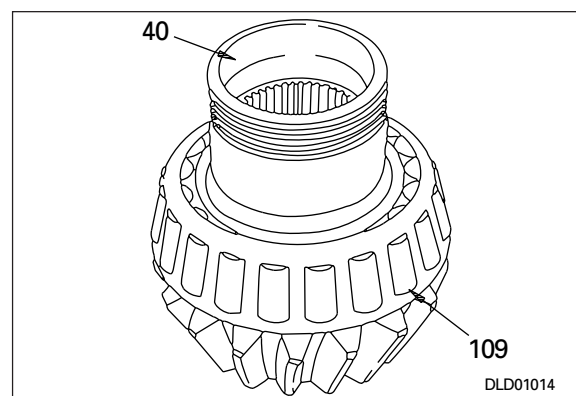
- 2) Disassembly of bevel pinion assembly
 - i) Remove bolts (35), (36) and pin (37).
Serial No. 75001 –
 - ii) Hold with press to prevent pinion from moving, then use tool E2 to remove locknut (39).
 - iii) Using push tool (5), remove bevel pinion (40) from cage (41).



- iv) Remove bearing (42).
- v) Remove outer races (43) and (107) from cage (41).



- vi) Remove bearing (109) from bevel pinion (40).



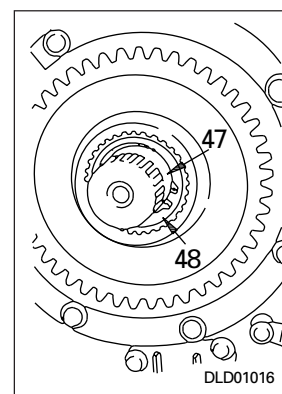
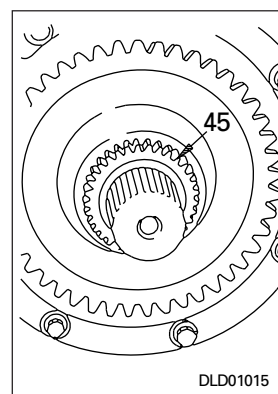
3. Sun gear

Remove sun gear (45).

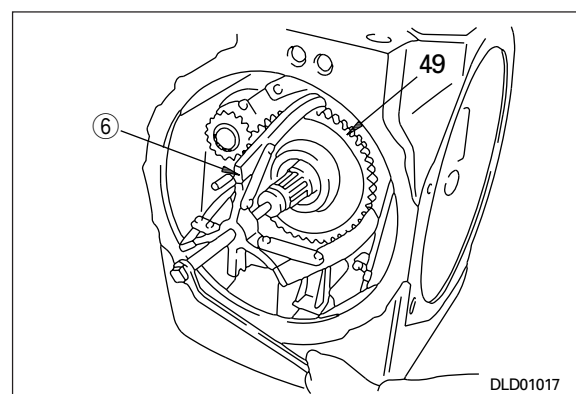
- ★ Remove the sun gear on the opposite side in the same way.

4. Gear

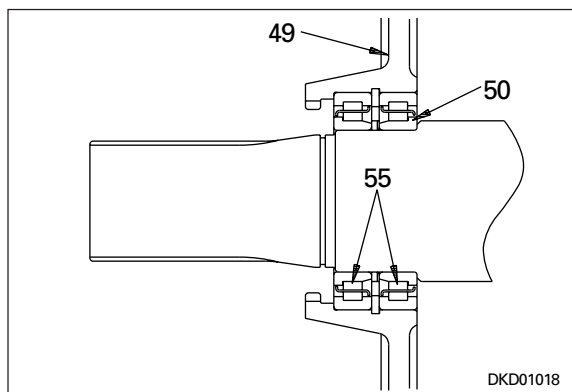
- 1) Remove snap ring (47), then remove spacer (48).



- 2) Using gear puller ⑥, remove gear (49).

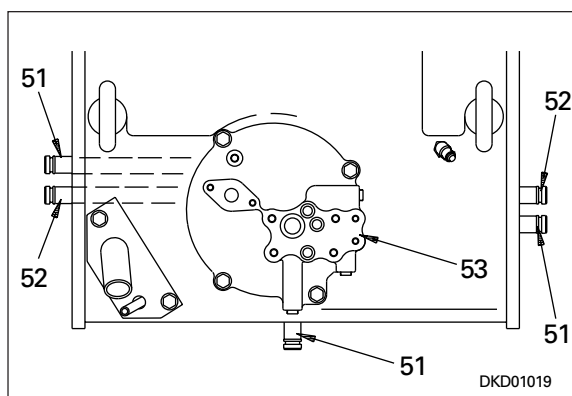


- ★ Only inner race (50) of bearing (55) will remain.
- ★ Remove the gear on the opposite side in the same way.



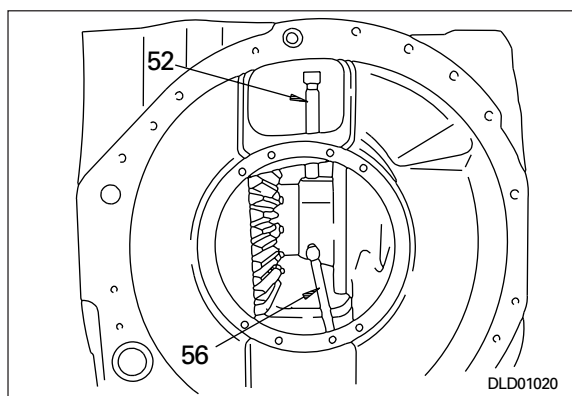
5. Valve seat

- 1) Pull out 2 brake circuit tubes (51) and 3 lubrication tubes (52), then remove.
- 2) Remove valve seat (53).

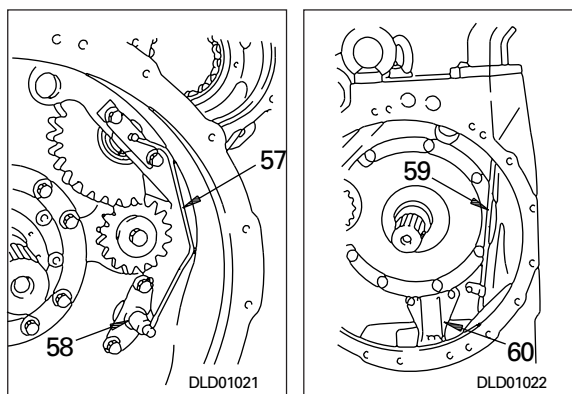


6. Lubrication tubes, dipstick tube, suction tube

- 1) Remove lubrication tubes (52) and (56).



- 2) Remove lubrication tubes (57) and (58).
- 3) Remove dipstick tube (59) and suction tube (60).



- Serial No. 75001 –
- vi) Turn the nut until the phase of any one of the pin insertion holes of the nut (8 places) is matched to that of any one of the pin insertion holes of the pinion shaft (5 places). (Returning angle: 0 - 9°)
- vii) Insert pin (37) in the above holes. Fit plate (36) and tighten bolts (35).



Bolt : **Thread tightener (LT-2)**



Bolt : **11.8 - 14.7 Nm**
{1.2 - 1.5 kgm}

- Using guide bolt ③, assemble shim (34) and install bevel pinion assembly (33).

★ There are three types of shim:

0.1, 0.2, 0.5 mm

6. Adjusting tooth contact, backlash

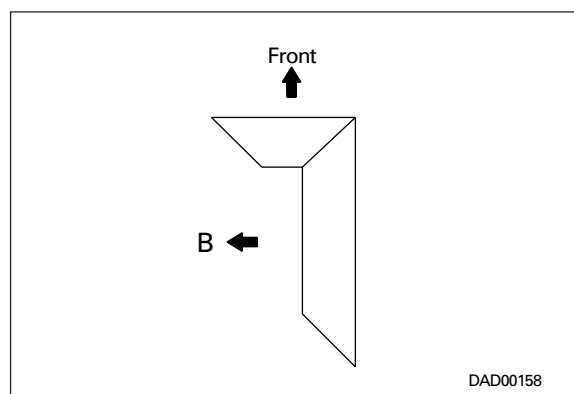
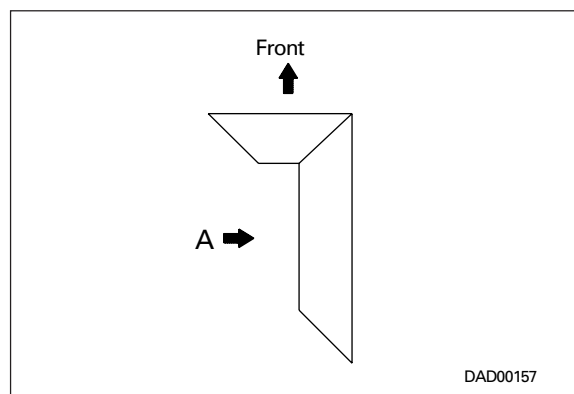
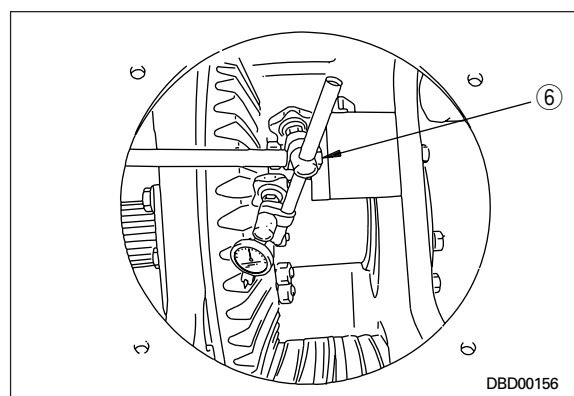
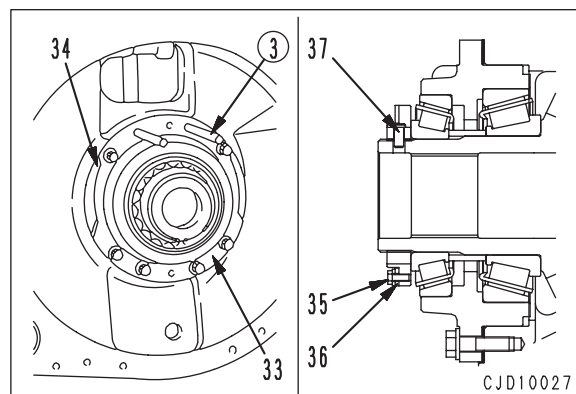
1) Adjusting backlash

Put the probe of dial gauge ⑥ at right angles in contact with the tip of the bevel gear teeth. Hold the bevel pinion in position, and read the measurement when the bevel gear is moved forward and backward.

★ Standard value for backlash :

0.25 - 0.33 mm

- ★ Measure at least three points on opposite sides.
- If the result of the inspection shows that the correct backlash is not being obtained, adjust as follows.
- ★ Adjust the shim thickness at the left cage.
- If backlash is too small
Loosen mounting bolt of cage and remove shim.
- If backlash is too large
Loosen mounting bolt of cage and add shim.



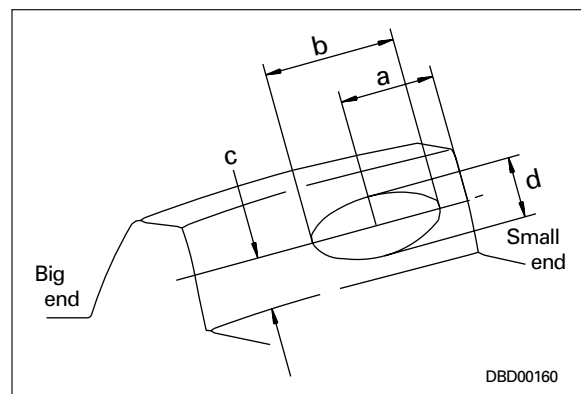
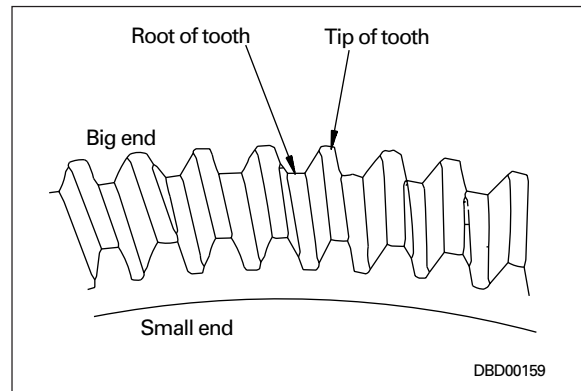
2) Adjusting tooth contact

Testing

- i) Coat the tooth face of the bevel pinion lightly with red lead (minium). Rotate the bevel gear forward and backward and inspect the pattern left on the teeth.
- ii) Tooth contact should be checked as follows (from tip of teeth of bevel pinion).
 - a) Center of tooth contact: 20 - 40 % of tooth width (from small end)
 - b) Width of tooth contact: 30 - 50 % of tooth width
 - c) Center of tooth contact: 35 - 65 % of tooth height (from root of tooth)
 - d) Width of tooth contact: 60 - 80 % of tooth height

In addition, there should be no strong contact at the addendum or dedendum (tip or root of the gear teeth) or at the big and small ends.

★ If the gears are adjusted to this pattern, the tooth contact will be correct when load is applied.



Adjustment

If the result of the inspection shows that the correct tooth contact is not being obtained, adjust again as follows.

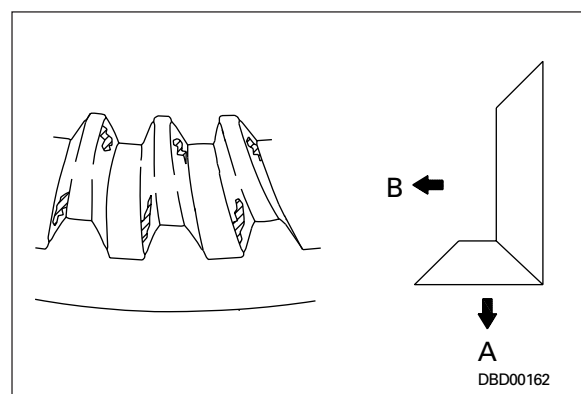
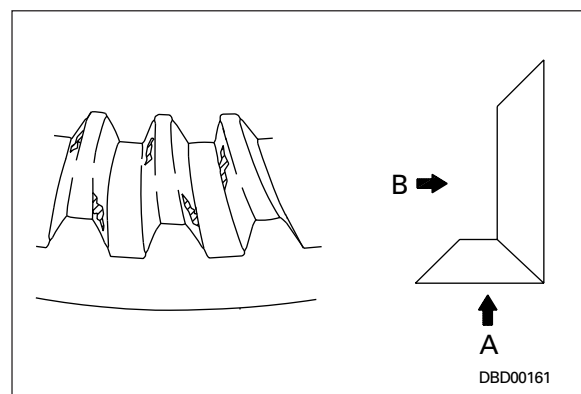
- i) If bevel pinion is too far from center line of bevel gear.

Contact is at the small end of the convex tooth face of the bevel gear and at the big end of the concave tooth face.

 - Correct the tooth contact as follows. Adjust the thickness of the shims at the bevel pinion to move the bevel pinion in direction **A**. Move the bevel gear in direction **B**, then check the tooth contact pattern and backlash again.
- ii) If bevel pinion is too close to center line of bevel gear.

Contact is at the big end of the convex tooth face of the bevel gear and the small end of the concave tooth face.

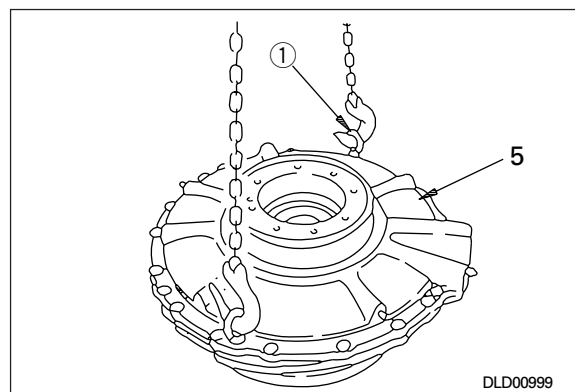
 - Correct the tooth contact as follows. Adjust the thickness of the shims at the bevel pinion to move the bevel pinion in direction **B**. Move the bevel gear in direction **A**, then check the tooth contact pattern and backlash again.



iii) Using eyebolts ①, align bolt hole with hub and brake drum, then install brake cover assembly (5).


★ Tighten the mounting bolts temporarily.

★ The force of the spring is applied, so tighten the hexagon socket head bolts uniformly.




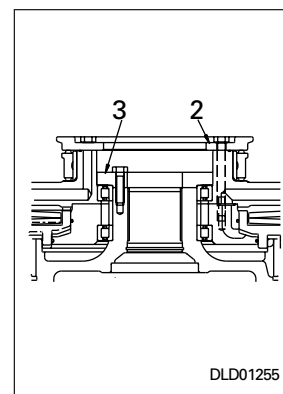
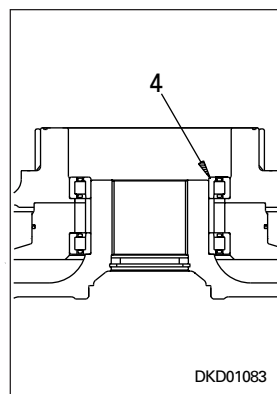
iv) Using push tool, press fit inner race (4).

v) Install plate (3) and flange (2).

 Flange: **58.8 - 73.6 Nm**
{6 - 7.5 kgm}

vi) Fully tighten bolts temporarily tightened in Step iii).


 Mounting bolt: **98.1 - 122.6 Nm**
{10 ± 12.5 kgm}



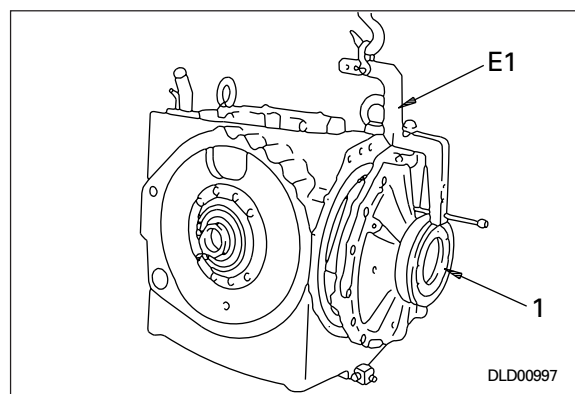
• Installation of brake, carrier assembly

1) Angle steering case assembly approx. 15° so that tool **E1** is perpendicular to ground surface.


2) Using tool **E1**, install brake, carrier assembly (1).

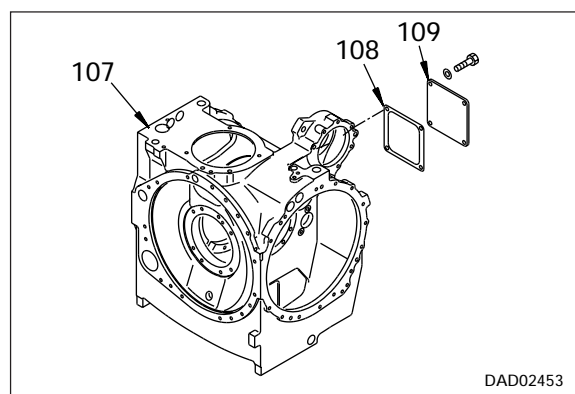
 Mounting bolt: **98.1 - 122.6 Nm**
{10 - 12.5 kgm}

★ Assemble the brake, carrier assembly on the opposite side in the same way.



★ When cover (109) of the rear surface on HSS case (107) has been removed, install new gasket (108).

 Gasket (apply to both surfaces):
Gasket sealant (LG-1)



REMOVAL OF HYDRAULIC PUMP ASSEMBLY

⚠ Park the machine on level ground, lower the work equipment completely to the ground, then disconnect the cable from the negative (-) terminal of the battery.

1. Drain hydraulic oil and power train oil.



Hydraulic oil : **Approx. 97 ℓ**



Power train case : **Approx. 60 ℓ**

2. Remove cab.
For details, see REMOVAL OF CAB ASSEMBLY.

3. Lift off operator's seat assembly (1).

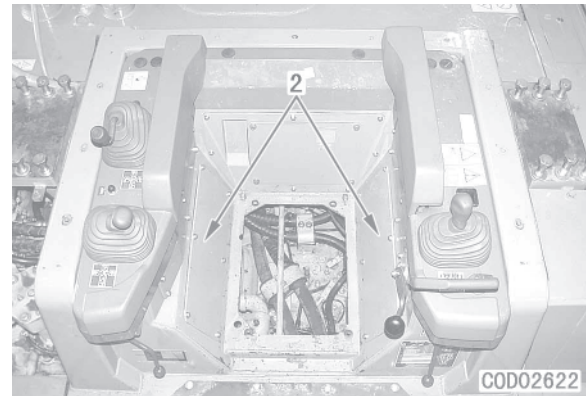


Operator's seat : **54 kg**

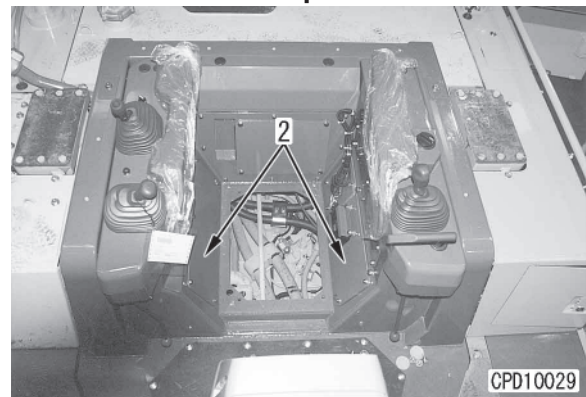
4. Remove floor frame left and right side covers (2).



Serial No. 70001 – 75000



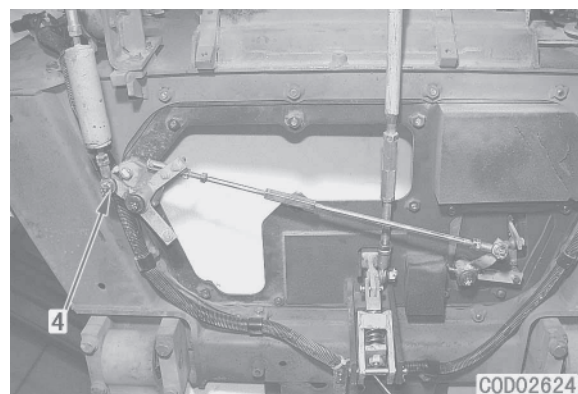
Serial No. 75001 and up



5. Remove floor mat, then remove cover (3).



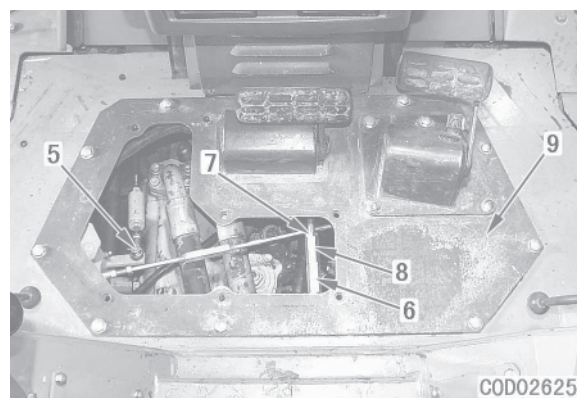
6. Disconnect acceleration rod (4) from yoke.



7. Disconnect deceleration rod (5) from yoke.
 8. Disconnect brake rod (6).
 ★ Loosen locknut (7), and turn joint (8) to disconnect.
 Joint (8) has a reverse thread.
 9. Remove floor assembly (9).

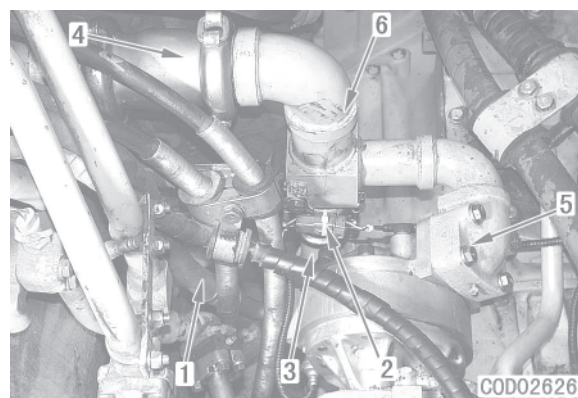


Floor assembly: **26 kg**



A. Removal of hydraulic pump assembly

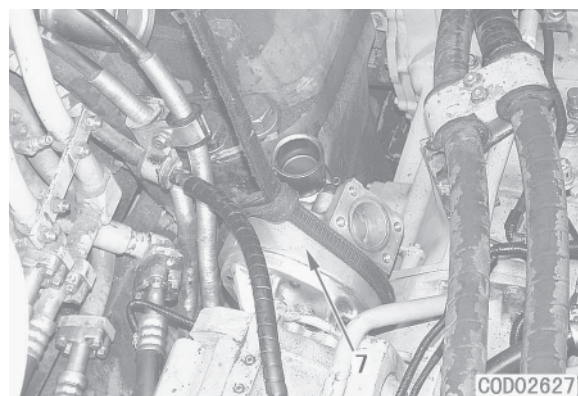
- 1) Disconnect hose (1) leading to work equipment control valve.
 2) Disconnect wiring connector (2) (HHP).
 3) Disconnect suction tube joints (3) and (4).
 4) Remove 4 mounting bolts (5), then remove tube (6).



- 5) Remove mounting bolts, then remove hydraulic pump assembly (7).

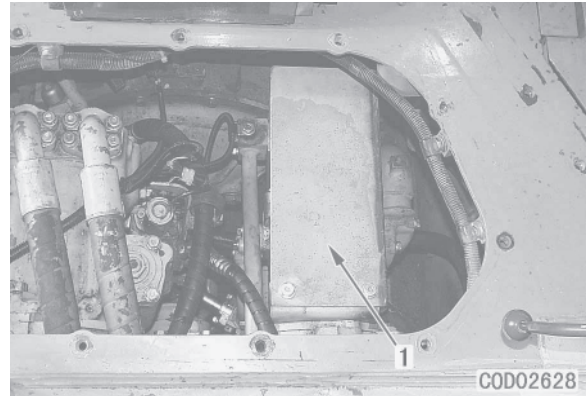


Hydraulic pump assembly : **19 kg**



B. Removal of 3-spool pump assembly (HSS lubrication + torque converter, transmission charge + torque converter charge pump)

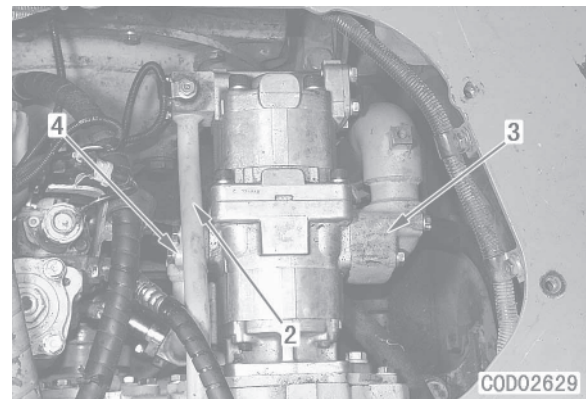
1) Remove cover (1).



2) Disconnect HSS motor and brake lubrication tube (2).

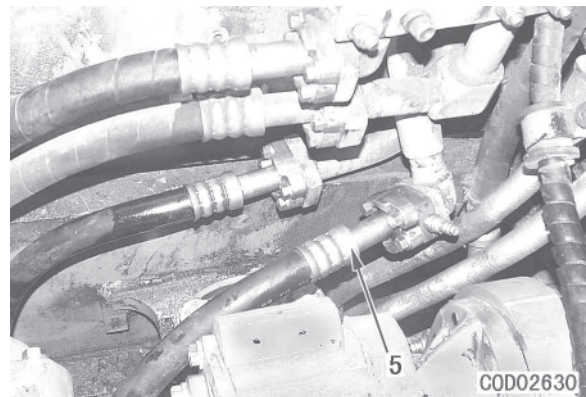
3) Disconnect suction tube (3) from power train case.

4) Disconnect transmission filter hose (4).



5) Disconnect filter bypass valve hose (5).

★ It is difficult to disconnect the hose at the pump end.

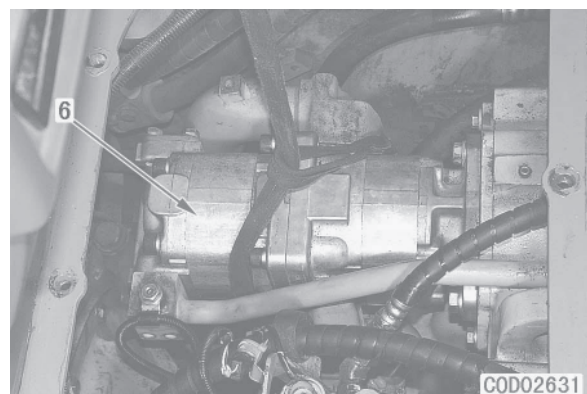


6) Remove mounting bolts, then lift off 3-spool pump assembly (6).

★ Remove together with hose (5).

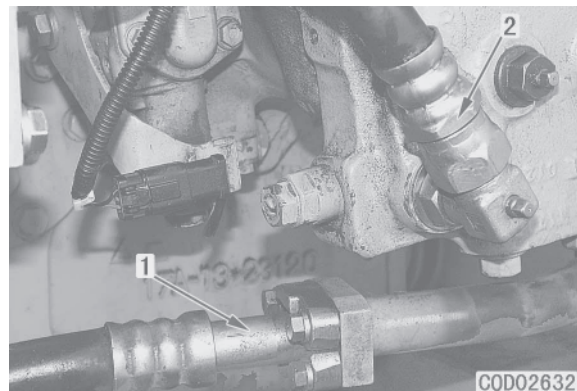


3-spool pump assembly : 24 kg

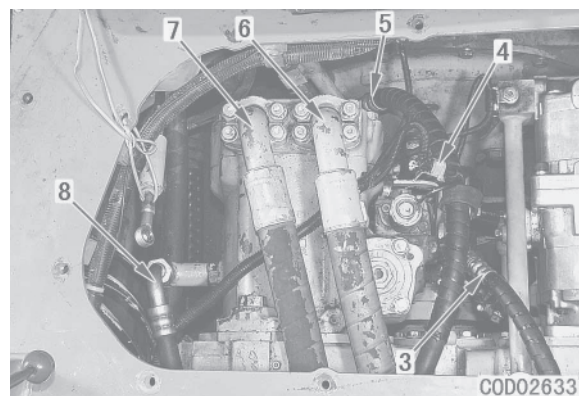


C. Removal of HSS pump assembly

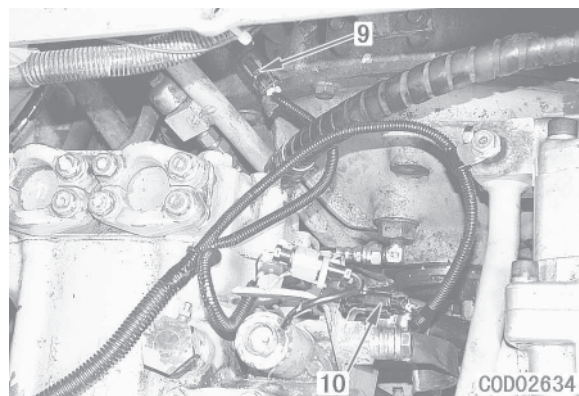
- 1) Disconnect HSS and PPC charge valve hose (1).
- 2) Disconnect cooler bypass valve hose (2).



- 3) Disconnect charge filter hose (3).
- 4) Disconnect solenoid wiring connector (4) (PUP.A).
- 5) Disconnect cooler bypass valve hose (5).
- 6) Disconnect HSS motor hoses (6) and (7).
- 7) Disconnect charge relief valve hose (8).



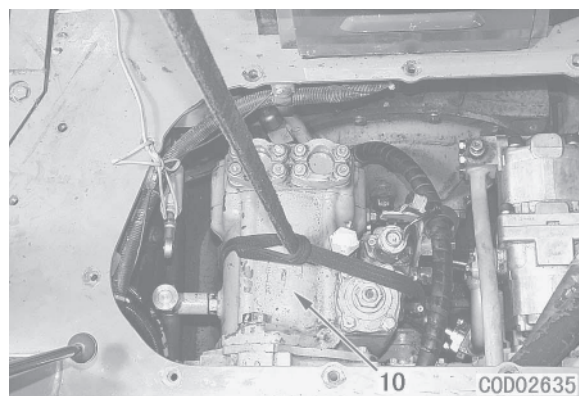
- 8) Disconnect engine speed sensor wiring connector (9) (CN010).
- 9) Disconnect solenoid wiring connector (10) (PUP.B).



- 10) Remove mounting bolts, then lift off HSS pump assembly (10).

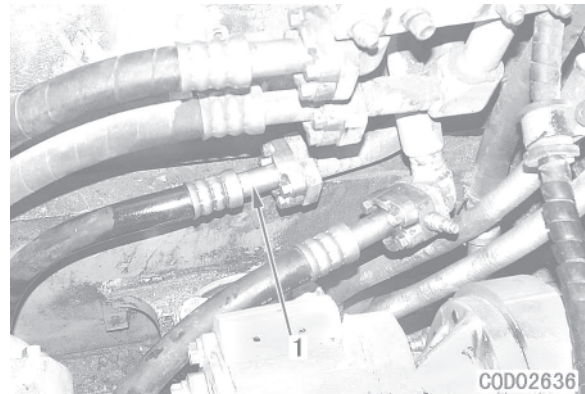


HSS pump assembly : **116 kg**

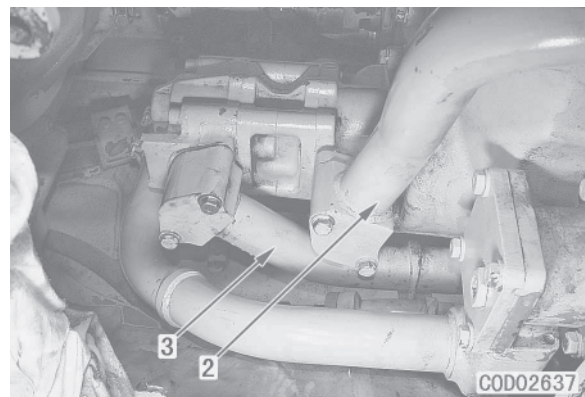


D. Removal of charge + scavenging pump assembly

- 1) Disconnect charge filter hose (1).
 - ★ It is difficult to disconnect the hose at the pump end.



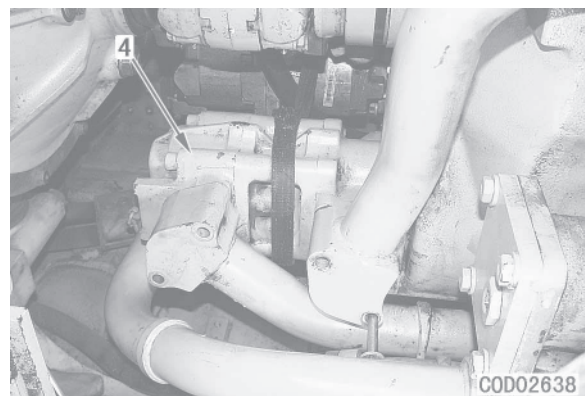
- 2) Disconnect power train case suction tube (2).
- 3) Disconnect suction hydraulic tank tube (3).



- 4) Lift off charge + scavenging pump assembly (4).
 - ★ Raise, then move slowly towards the engine, and lower gradually from clearance.



Charge + scavenging pump assembly :
30 kg



INSTALLATION OF HYDRAULIC PUMP ASSEMBLY

- Carry out installation in the reverse order to removal.

- **Refilling oil**



Hydraulic oil : **Approx. 97 ℓ**

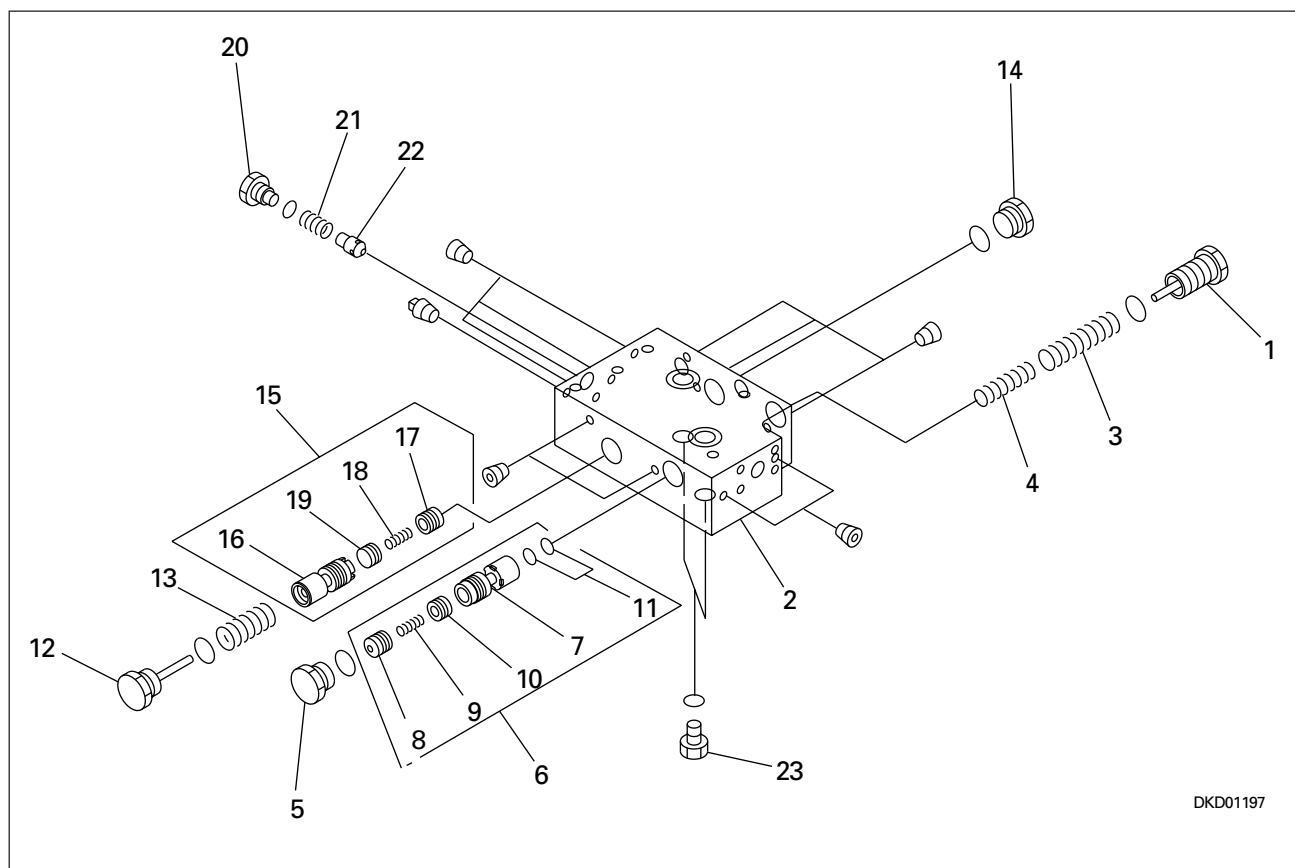


Power train case : **Approx. 60 ℓ**

- **Bleeding air**

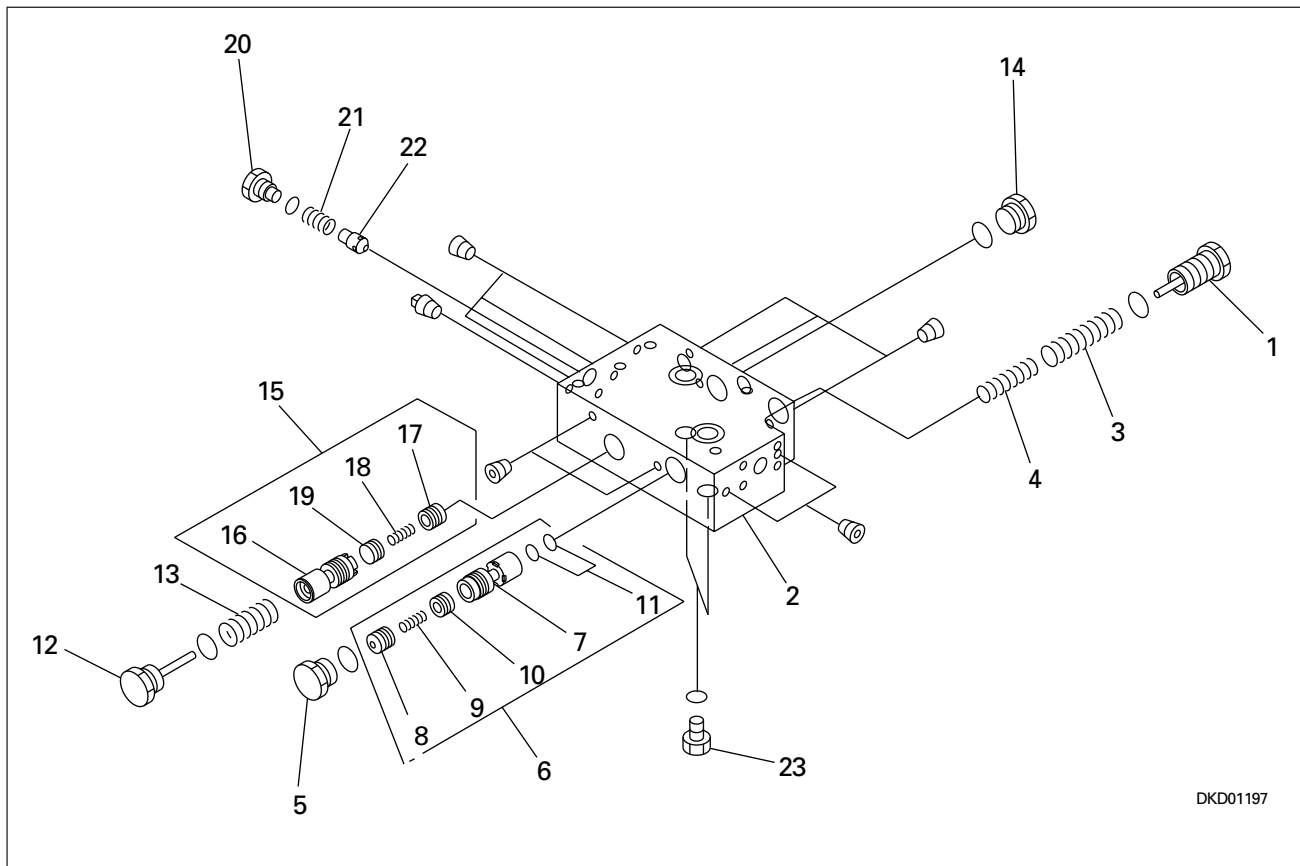
Bleed the air from the pumps and power train.
For details, see TESTING AND ADJUSTING,
Bleeding air.

DISASSEMBLY OF HSS, PPC CHARGING VALVE ASSEMBLY



1. Remove plug (1), then remove springs (3) and (4) from valve body (2).
2. Remove plug (5), then remove spool assembly (6).
3. Remove valve (8), spring (9), valve (10), and shim (11) from spool (7).
4. Remove plug (12), then remove spring (13).
5. Remove plug (14), then remove spool assembly (15).
6. Remove valve (17), spring (18), and valve (19) from spool (16).
7. Remove plug (20), then remove spring (21) and valve (22).
8. Remove plug (23).

ASSEMBLY OF HSS, PPC CHARGING VALVE ASSEMBLY



DKD01197

★ Clean all parts, and check for dirt or damage. Coat the sliding surfaces of all parts with engine oil before installing.

1. Tighten plug (23).
2. Assemble valve (22) and spring (21) to valve body (2), and tighten plug (20).
3. Assemble valve (19), spring (18), and valve (17) to spool (16).
4. Assemble spool assembly (15) to valve body (2), and tighten plug (14).
 kgm Plug : $63.7 \pm 14.7 \text{ Nm}$ { $6.5 \pm 1.5 \text{ kgm}$ }
5. Assemble spring (13) and tighten plug (12).
 kgm Plug : $68.6 \pm 9.8 \text{ Nm}$ { $7 \pm 1 \text{ kgm}$ }
6. Assemble valve (10), spring (9), valve (8), and shim (11) to spool (7).
 ★ Check the number and thickness of the shims, then assemble.
 Shim thickness: 0.5 mm
 No. of shims: 4
7. Assemble spool assembly (6) to valve body (2) and tighten plug (5).
 kgm Plug : $68.6 \pm 9.8 \text{ Nm}$ { $7 \pm 1 \text{ kgm}$ }

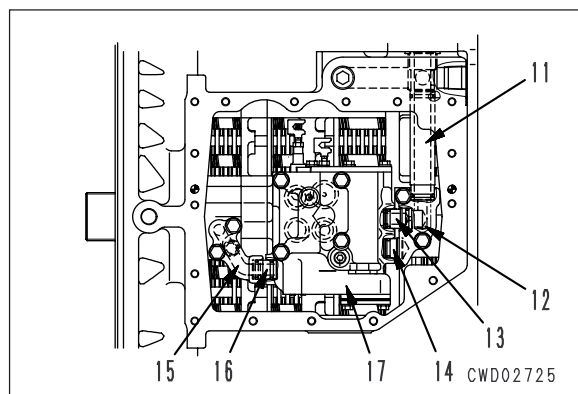
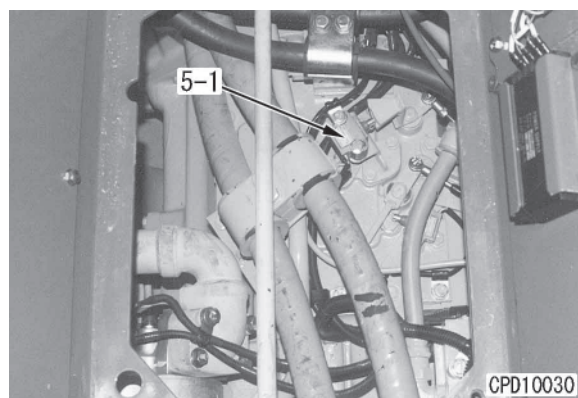
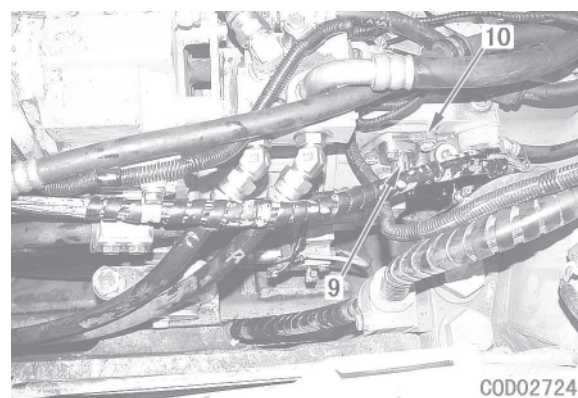
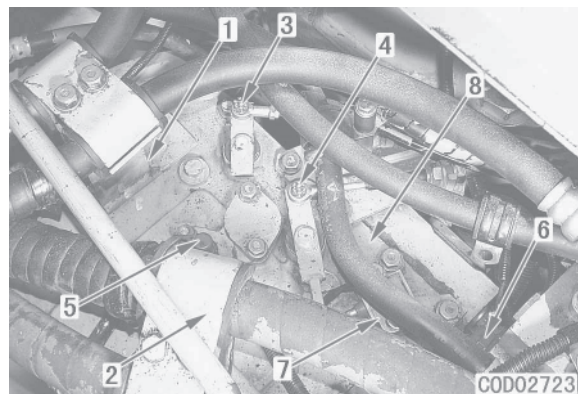
8. Assemble springs (4) and (3), and tighten plug (1).

kgm Plug : $68.6 \pm 9.8 \text{ Nm}$ { $7 \pm 1 \text{ kgm}$ }

REMOVAL OF TRANSMISSION CONTROL VALVE ASSEMBLY

⚠ Park the machine on level ground, lower the work equipment completely to the ground, then disconnect the cable from the negative (-) terminal of the battery.

1. Remove operator's seat and floor plate.
For details, see REMOVAL OF HYDRAULIC PUMP ASSEMBLY.
2. Disconnect hose brackets (1) and (2) from transmission case cover.
3. Disconnect speed control cable (3), and remove bracket from case cover.
★ Do not disconnect the cable from the bracket.
4. Disconnect directional control cable (4), and remove bracket from case cover.
★ Do not disconnect the cable from the bracket.
5. Disconnect transmission modulation pressure detection hose (5).
6. Disconnect wiring connector of gear speed detection limit switch (5-1).
• Serial No. Only 75001 and up
7. Disconnect backup alarm limit switch wiring connector (6) (CN251), and remove limit switch (7).
8. Using forcing screws, remove transmission cover (8).
※ 1
9. Disconnect hose (9) coming from charge pump, and remove plate (10).
10. Remove sleeve (11), then remove block (12).



10. Remove sleeves (13) and (14). ※ 2
11. Remove block (15), then remove sleeve (16). ※ 3
12. Remove mounting bolts, then remove transmission control valve assembly (17). ※ 4

INSTALLATION OF TRANSMISSION CONTROL VALVE ASSEMBLY

- Carry out installation in the reverse order to removal.

※ 1

- ★ Look through the inspection window in the cover to check that the lever and yoke are meshed, then tighten the mounting bolts.
- ★ When installing the cover, tap with a plastic hammer. If the dowel pin portion is not inserted, remove the cover, correct the meshing of the lever and yoke, then install again.

※ 2

※ 3

Sleeve : **Grease (G2-LI)**

※ 4



Transmission control valve mounting bolt :
49.0 ± 4.9 Nm {5.0 ± 0.5 kgm}

INSTALLATION OF BLADE PPC VALVE ASSEMBLY

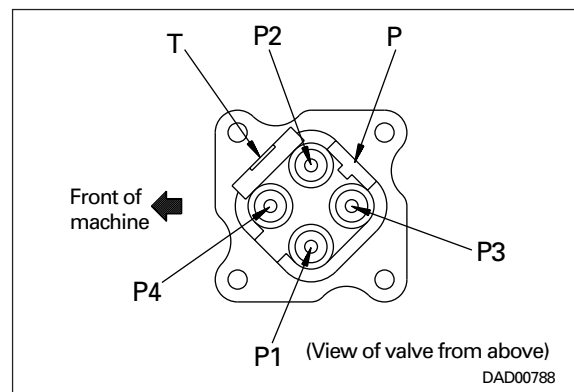
- Carry out installation in the reverse order to removal.

※ 1 ※ 2 ※ 3

- ★ The connection position for the pump hose, drain hose, and PPC hose are distinguished by color bands at the caulking portion for the hoses, so check the colors when connecting.

※ 4

- ★ Set the PPC valve in the mounting direction shown in the diagram on the right when installing.
(The diagram on the right shows the PPC valve as seen from the top of the panel.)
- **Refilling with oil (hydraulic tank)**
Add engine oil through oil filler to the specified level.
 - ★ Run the engine to circulate the oil through the system. Then check the oil level again.



REMOVAL OF RIPPER PPC VALVE ASSEMBLY

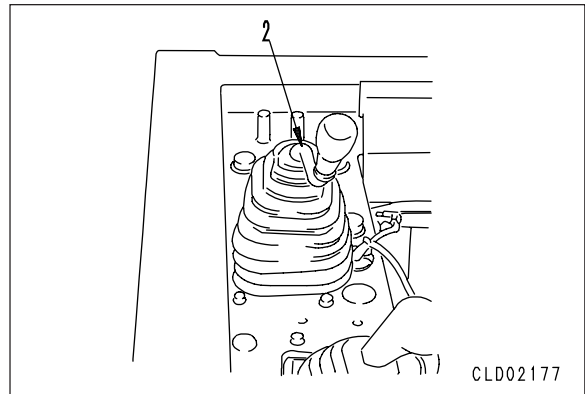
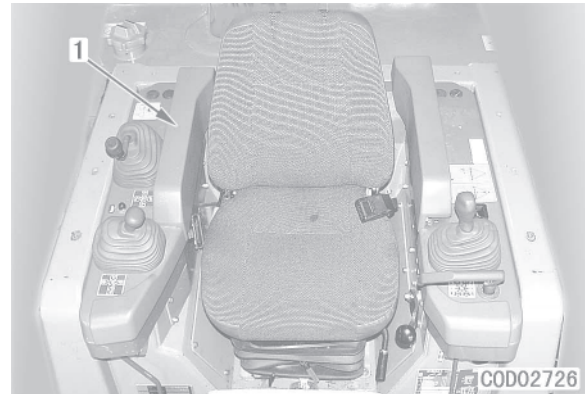
⚠ Fully lower work equipment to the ground. Release the remaining pressure in the circuit. For details, see TESTING AND ADJUSTING, RELEASING REMAINING PRESSURE IN HYDRAULIC CIRCUIT. Then loosen the oil filler cap slowly to release the pressure inside the hydraulic tank.

1. Remove operator's seat, remove 1 cover on inside right, then remove side cover on right side of chassis.



Operator's seat: **50 kg**

2. Remove cover (1).
★ Disconnect the horn switch connector (CN262) at the same time.
3. Loosen lock bolt of lever (2), and pull out lever (2) together with boot.
4. Remove lever guide.
Serial No. Only 75001 and up

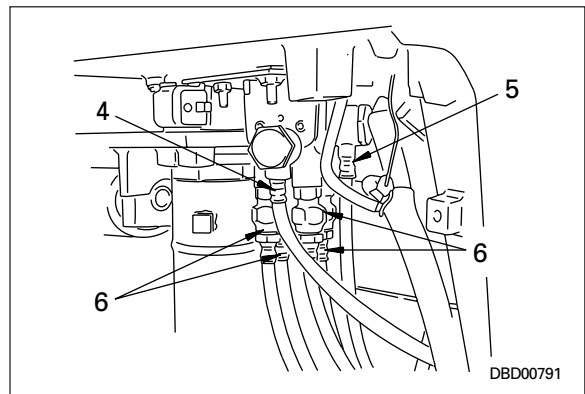


5. Disconnect pump hose (4).
6. Disconnect drain hose (5).
7. Disconnect PPC hose (6).

※ 1

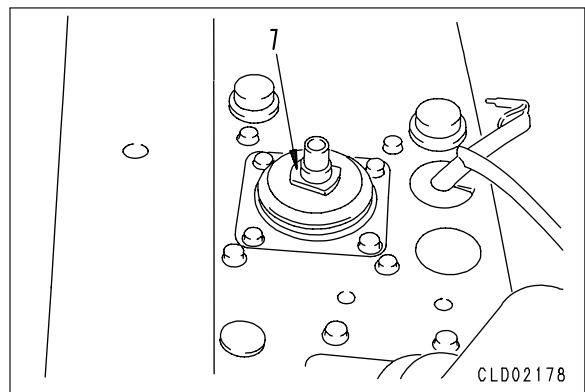
※ 2

※ 3



7. Remove ripper PPC valve assembly (7).

※ 4



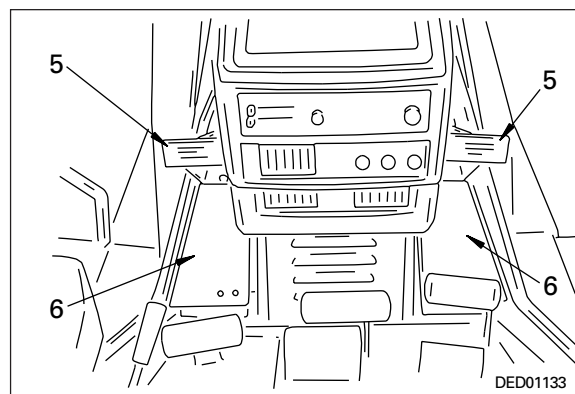
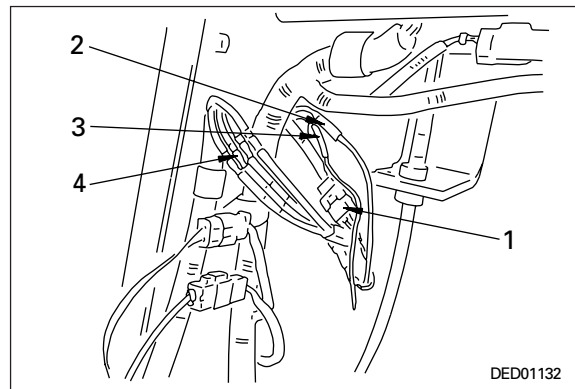
REMOVAL OF OPERATOR CAB ASSEMBLY

Serial No. 70001 – 75000

⚠ Disconnect the cable from the negative (–) terminal of the battery.

1. Remove ROPS guard.
For details, see REMOVAL OF ROPS GUARD.
2. Open left side cover.
3. Disconnect connectors (1) (CN360), (2) (CN-CAB1), and (3) (CN-CAB2).
4. Disconnect 4 washer hoses (4). ※ 1
5. Remove step (5), then remove cover (6).
6. Remove garnishes (7), (8), and (9).
7. Remove 19 mounting bolts, then lift off operator cab assembly (10).

4 Operator cab assembly: **290 kg**



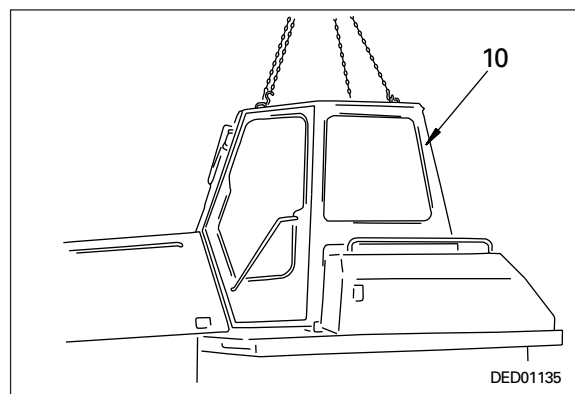
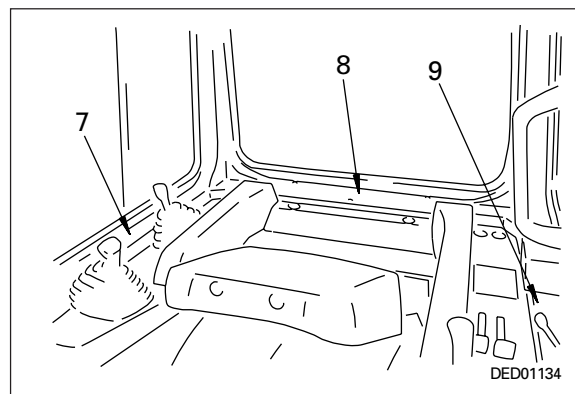
INSTALLATION OF OPERATOR CAB ASSEMBLY

Serial No. 70001 – 75000

- Carry out installation in the reverse order to removal.

※ 1

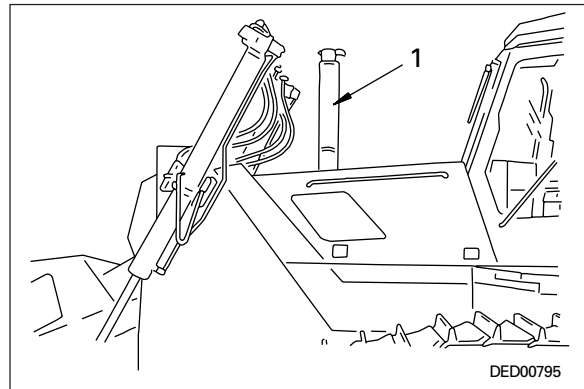
- ★ Match the color bands and connect the washer hoses.



REMOVAL OF HOOD ASSEMBLY

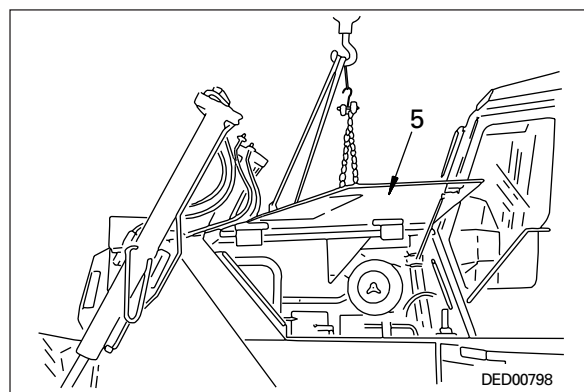
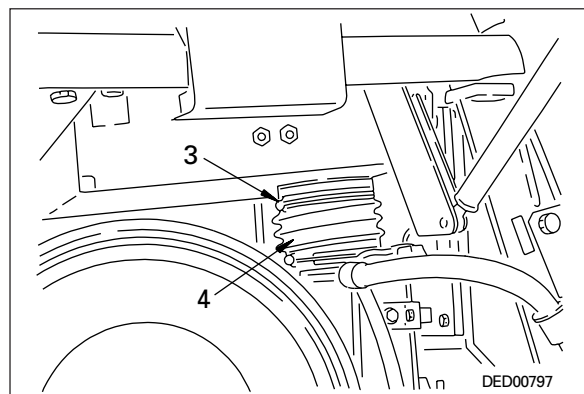
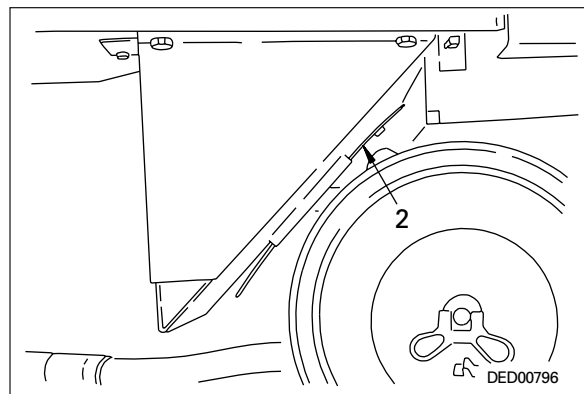
1. Remove exhaust pipe (1).
2. Remove partition (2), then remove rubber seal.
3. Loosen clamp (3) and disconnect connector (4) from hood end.
4. Lift off hood assembly (5).

4 Hood assembly: **90 kg**



INSTALLATION OF HOOD ASSEMBLY

- Carry out installation in the reverse order to removal.




REMOVAL OF FLOOR FRAME ASSEMBLY

Serial No. 70001 – 75000

⚠ Park the machine on level ground, lower the work equipment completely to the ground, then disconnect the cable from the negative (-) terminal of the battery.

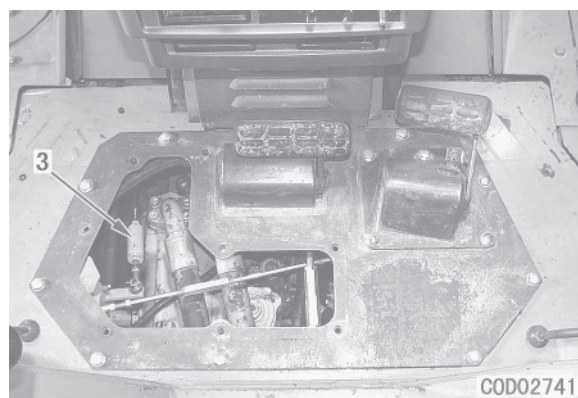
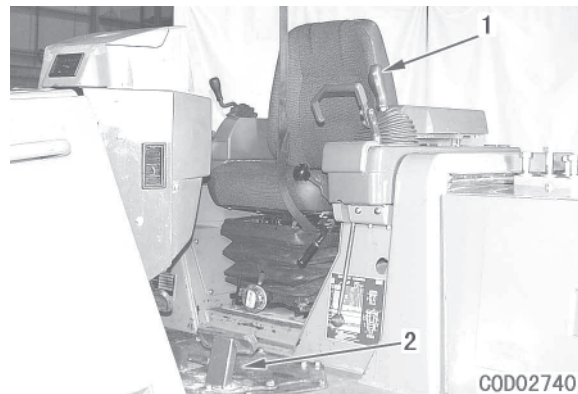
1. Remove operator cab assembly.
For details, see REMOVAL OF OPERATOR CAB ASSEMBLY.

2. Lift off operator's seat (1).

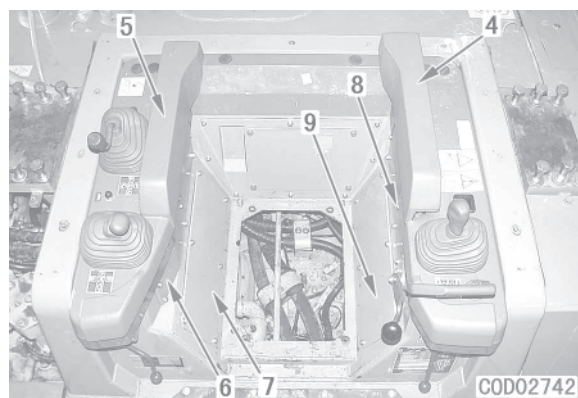
 Operator's seat : **54 kg**

3. Remove floor plate (2).

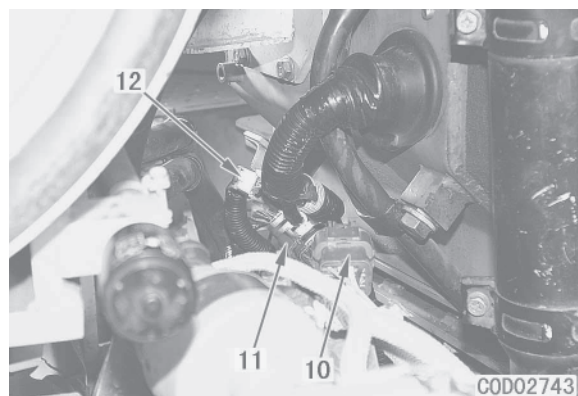
4. Disconnect deceleration rod (3).



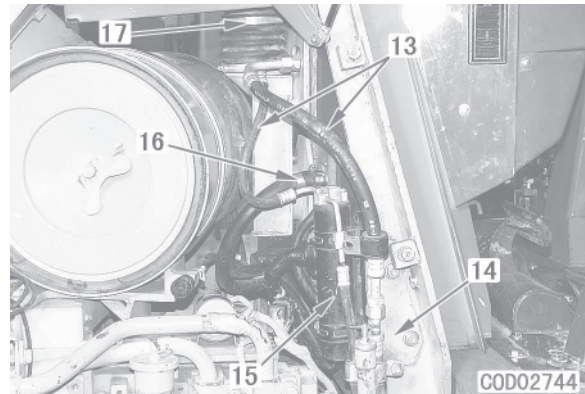
5. Remove left armrest (4) and right armrest (5).
6. Remove right side covers (6) and (7).
7. Remove left side covers (8) and (9).



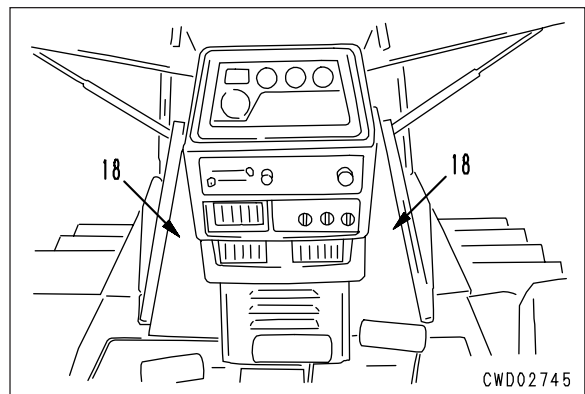
8. Disconnect engine wiring connector (10) (CN101).
9. Disconnect monitor wiring connector (11) (CN214).
10. Disconnect panel lighting wiring connector (12) (CN215).



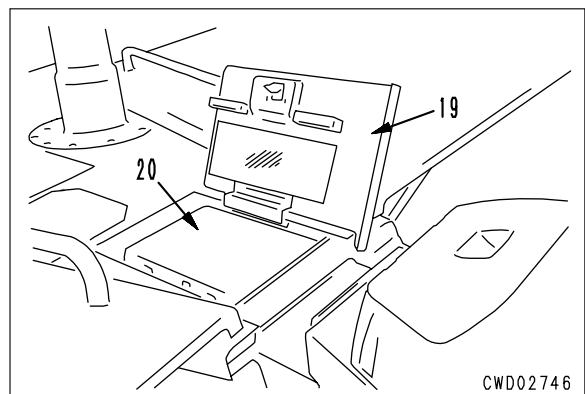
11. Disconnect air conditioner hoses (13). ※ 1
★ Using tool X, collect new freon gas (R134a).
12. Remove bracket (14), and move receiver tank (15) towards outside.
13. Disconnect 2 heater hoses (16).
★ Close the heater hose valve at the engine end.
★ Fit blind plugs after disconnecting.
14. Loosen bellows hose clamp (17), and disconnect bellows hose from engine hood.



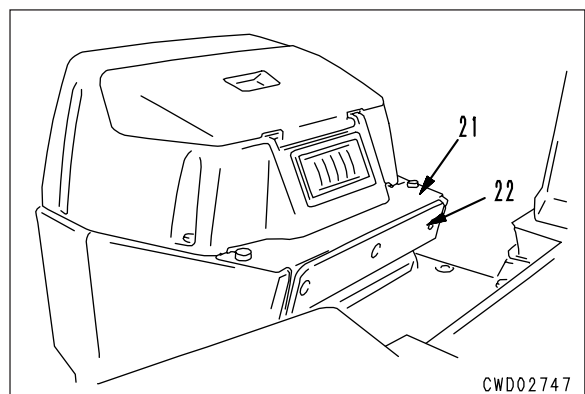
15. Remove 2 covers (18).



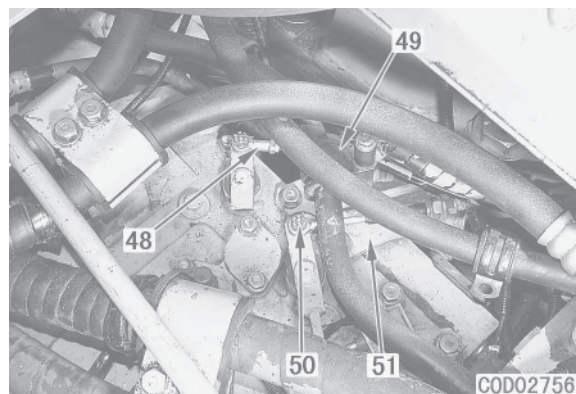
16. Open cover (19), remove cleaner cover (20) and filter, then remove cover (19).



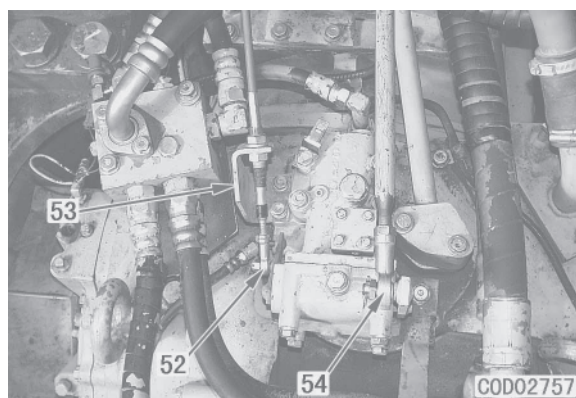
17. Remove covers (21) and (22), and install eyebolts.



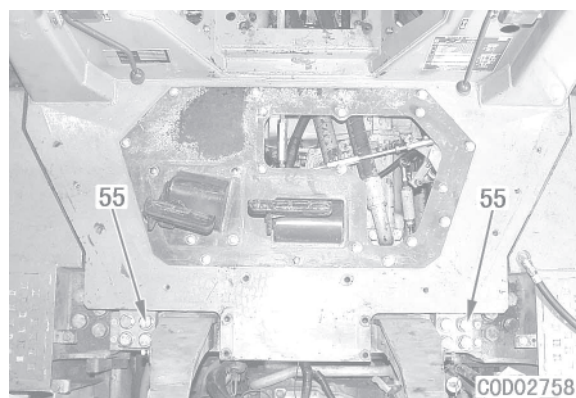
35. Disconnect speed control cable (48), and remove bracket (49) from transmission case.
36. Disconnect directional selector control cable (50), and remove bracket (51) from transmission case.



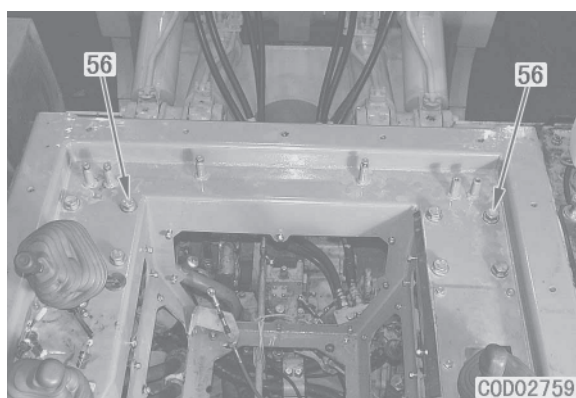
37. Disconnect parking brake cable (52) from brake valve, and remove bracket (53) from HSS case.
38. Disconnect brake control rod (54) from brake valve.
 - ★ After disconnecting the cable and rod, tie them to the floor frame.



39. Remove 8 front mount bolts (55).



40. Remove 8 suspension mounting bolts (56).



41. Lift off floor frame assembly (57).

Floor frame assembly : **230 kg**

- ★ Control with a lever block to avoid interference when removing.

INSTALLATION OF FLOOR FRAME ASSEMBLY

Serial No. 70001 – 75000

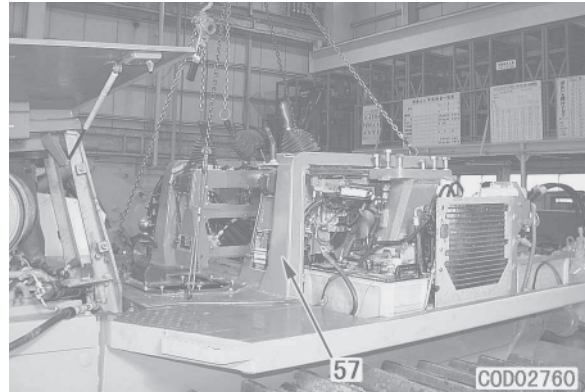
- Carry out installation in the reverse order to removal.

※ 1

- ★ Install the hoses without twisting or interference.
- ★ Install the air conditioner circuit hoses carefully to prevent dirt, dust, or water from getting inside the hoses.
- ★ Check that there are O-rings at the piping connection of the air conditioner hoses, and coat the O-rings thoroughly with compressor oil before connecting.

※ 2

- ★ The positions for connecting the PPC hoses are distinguished by color bands at the quick coupler, so check the colors when installing.



REMOVAL OF DASHBOARD ASSEMBLY

Serial No. 70001 – 75000

⚠ Park the machine on level ground, lower the work equipment completely to the ground, then disconnect the cable from the negative (–) terminal of the battery.

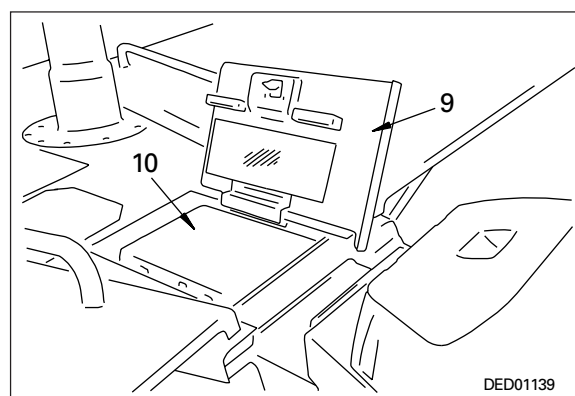
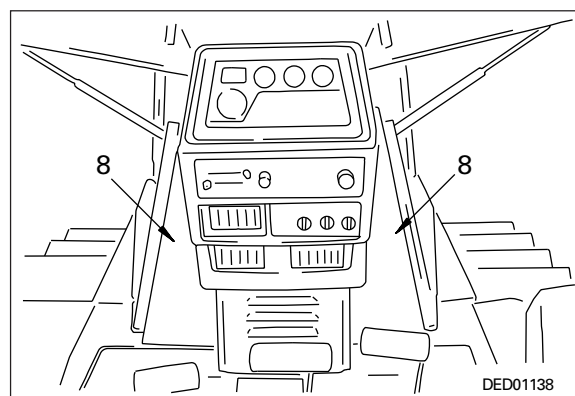
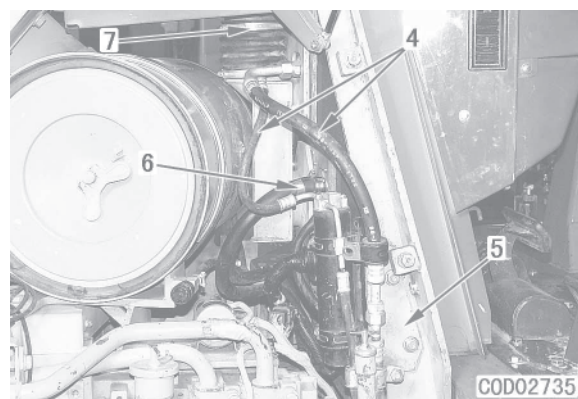
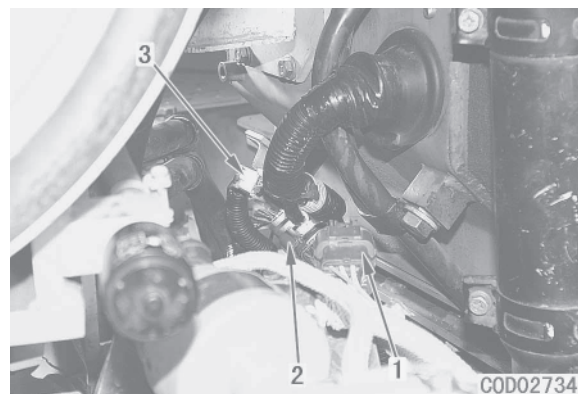
1. Remove operator's cab assembly.
For details, see REMOVAL OF OPERATOR'S CAB ASSEMBLY.

2. Disconnect engine wiring connector (1) (CN101).
3. Disconnect monitor wiring connector (2) (CN214).
4. Disconnect panel lighting wiring connector (3) (CN215).

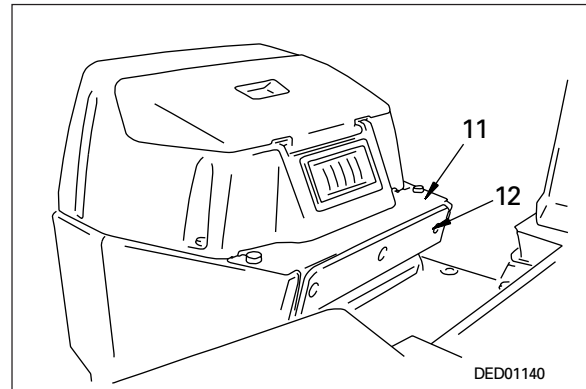
5. Disconnect air conditioner hoses (4). ※ 1
★ Using tool X, collect freon gas (R134a).
6. Remove bracket (5), and move receiver tank towards outside.
7. Disconnect 2 heater hoses (6).
★ Close the heater hose valve at the engine end.
★ After disconnecting, fit with blind plugs.
8. Loosen bellows hose clamp (7), and disconnect bellows hose from engine hood.

9. Remove 2 covers (8).

10. Open cover (9), remove cleaner cover (10) and filter, then remove cover (9).



11. Remove covers (11) and (12), and install eyebolts.



12. Remove mounting bolts, then lift off dashboard assembly (13).

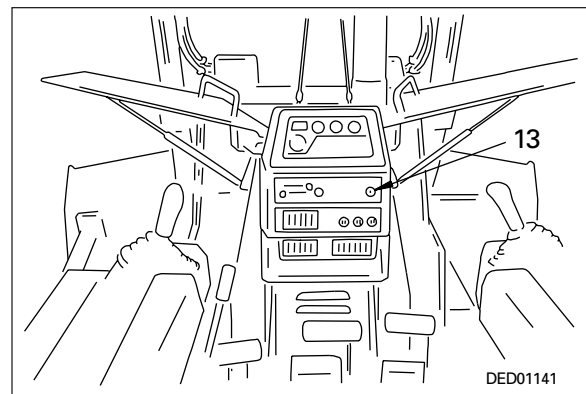


Dashboard assembly : 85 kg

INSTALLATION OF DASHBOARD ASSEMBLY

Serial No. 70001 – 75000

- Carry out installation in the reverse order to removal.



※ 1

- ★ Install the hoses without twisting or interference.
 - ★ Install the air conditioner circuit hoses carefully to prevent dirt, dust, or water from getting inside the hoses.
 - ★ Check that there are O-rings at the piping connection of the air conditioner hoses, and coat the O-rings thoroughly with compressor oil before connecting.
- Charging with air conditioner gas**
Using tool X, charge air conditioner circuit with new freon gas (R134a).

REMOVAL OF MONITOR ASSEMBLY

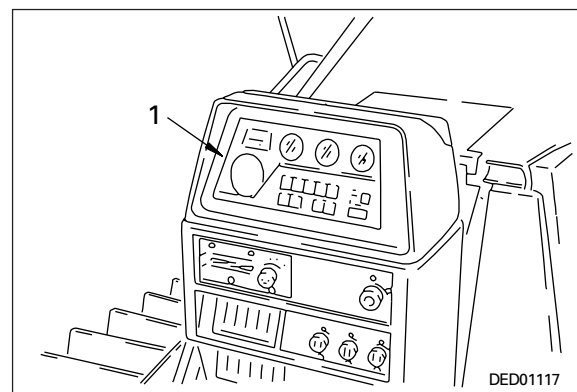
⚠ Disconnect the cable from the negative (–) terminal of the battery.

1. Remove mounting bolts and open monitor assembly (1).
2. Disconnect connectors (2) (CN-P1 and CN-P2), and remove monitor assembly (1).
 - Serial No. 70001 – 75000
3. Disconnect connectors (T01, CN4, CN1, CN2), and remove monitor assembly (1).
 - Serial No. 75001 –

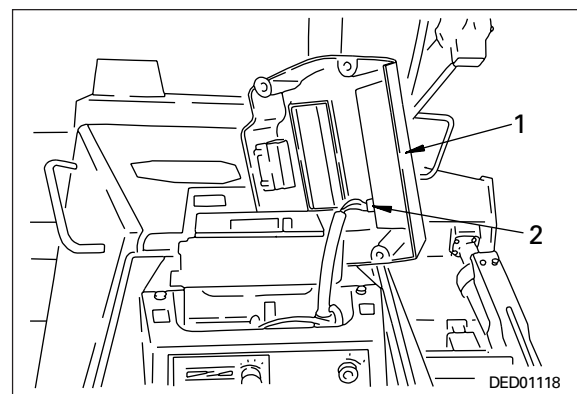
INSTALLATION OF MONITOR ASSEMBLY

- Carry out installation in the reverse order to removal.

Serial No. 70001 – 75000



Serial No. 70001 – 75000



Serial No. 75001 and up

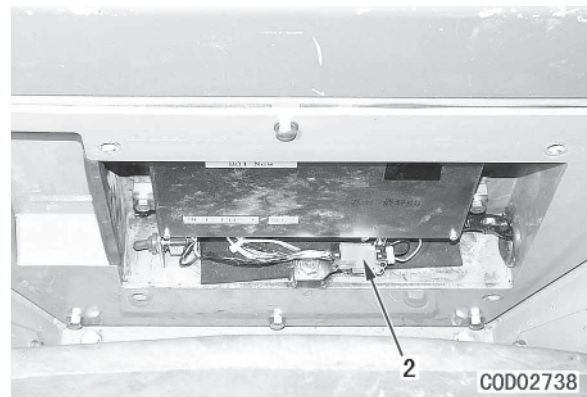
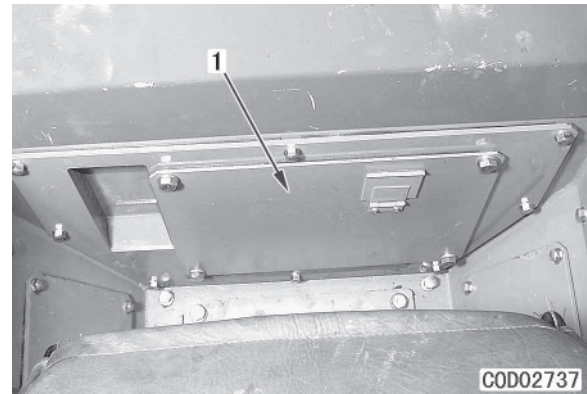


REMOVAL OF HSS CONTROLLER ASSEMBLY

Serial No. 70001 – 75000

⚠ Disconnect the cable from the negative (–) terminal of the battery.

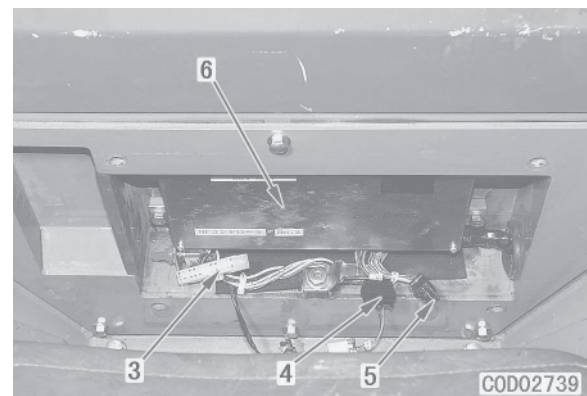
1. Remove cover (1) at rear of operator's seat.
2. Disconnect steering neutral adjustment switch wiring connector (2) (CN-CSW).
3. Disconnect HSS controller wiring connectors (3) (CN-1), (4) (CN-2H1), and (5) (CN-2H2).
4. Remove mounting bolts, then remove HSS controller assembly (6).



INSTALLATION OF HSS CONTROLLER ASSEMBLY

Serial No. 70001 – 75000

- Carry out installation in the reverse order to removal.

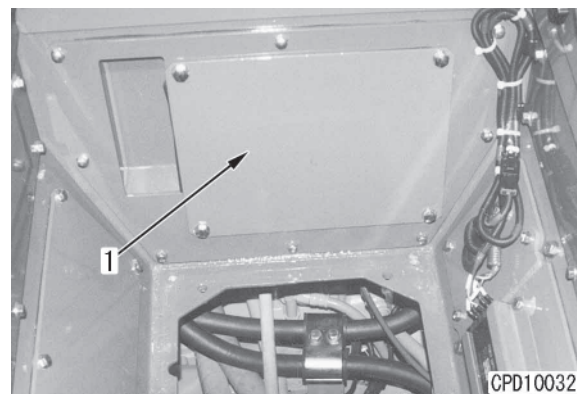


REMOVAL OF HSS CONTROLLER ASSEMBLY

Serial No. 75001 and up

⚠ Disconnect the cable from the negative (–) terminal of the battery

1. Remove cover (1) from rear of operator's seat.
2. Disconnect HSS controller wiring connector (2) (CN-ST1), (3) (CN-ST2), and (4) (CN-ST3.)
3. Remove mounting bolts and HSS controller assembly (5).



INSTALLATION OF HSS CONTROLLER ASSEMBLY

Serial No. 75001 and up

- Carry out installation in the reverse order to removal.

