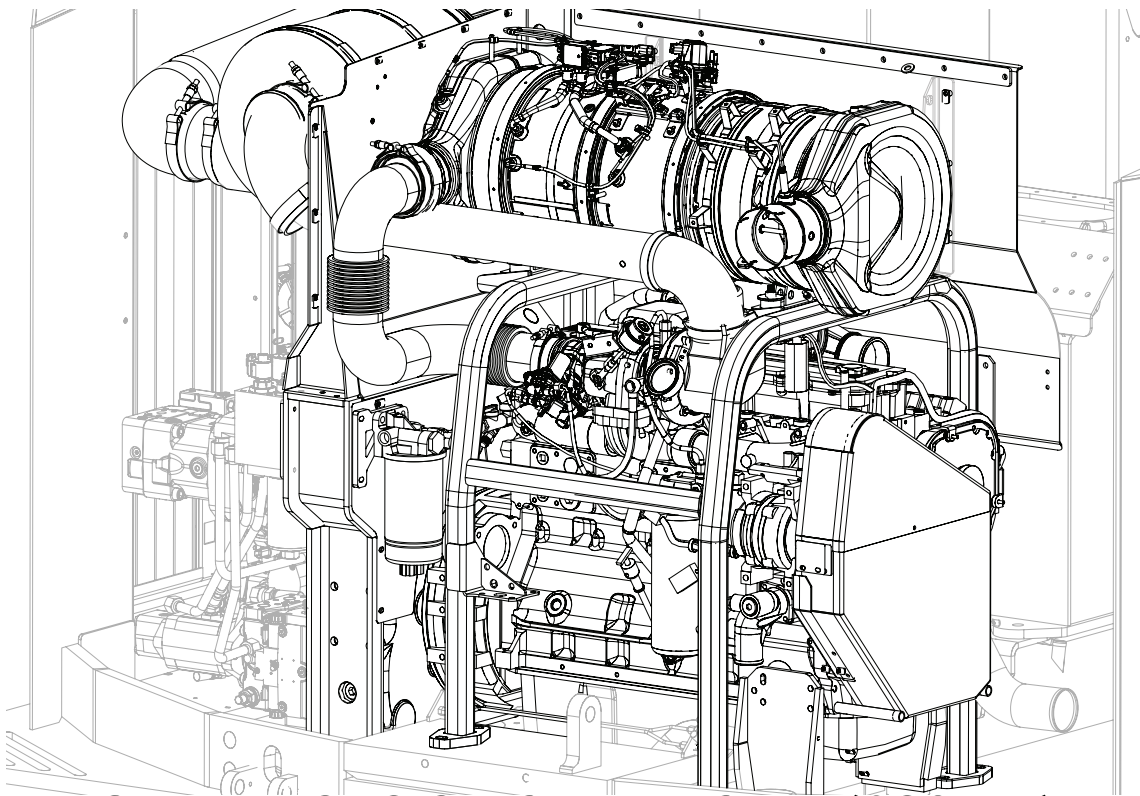


# SECTION EE-1

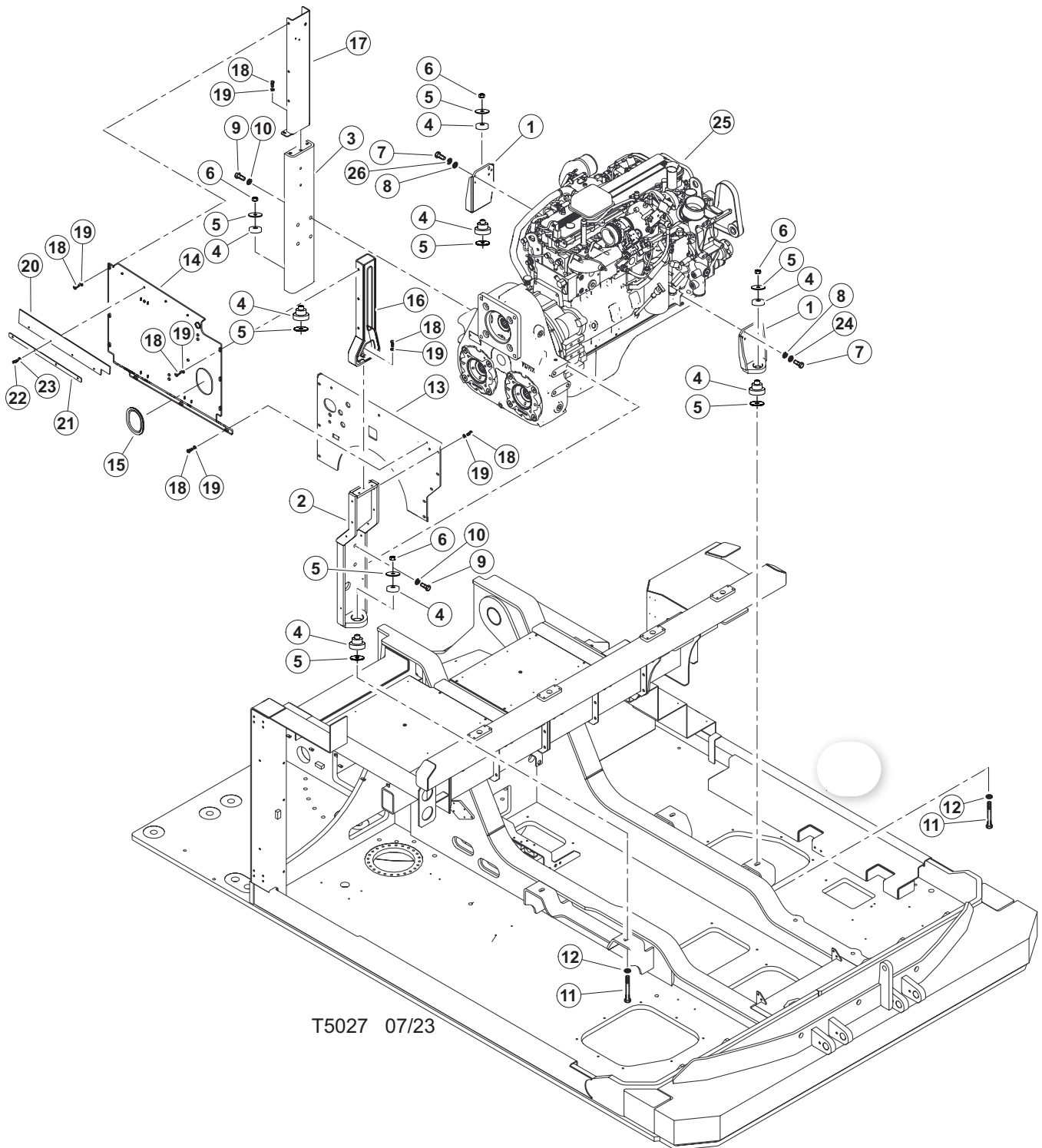
## CUMMINS L9 STAGE V ENGINE (390 HP) PARTS AND INSTALLATION



**CUMMINS L9 STAGE V ENGINE (390 HP)**

# ENGINE PARTS AND INSTALLATION

## CUMMINS ENGINE INSTALLATION

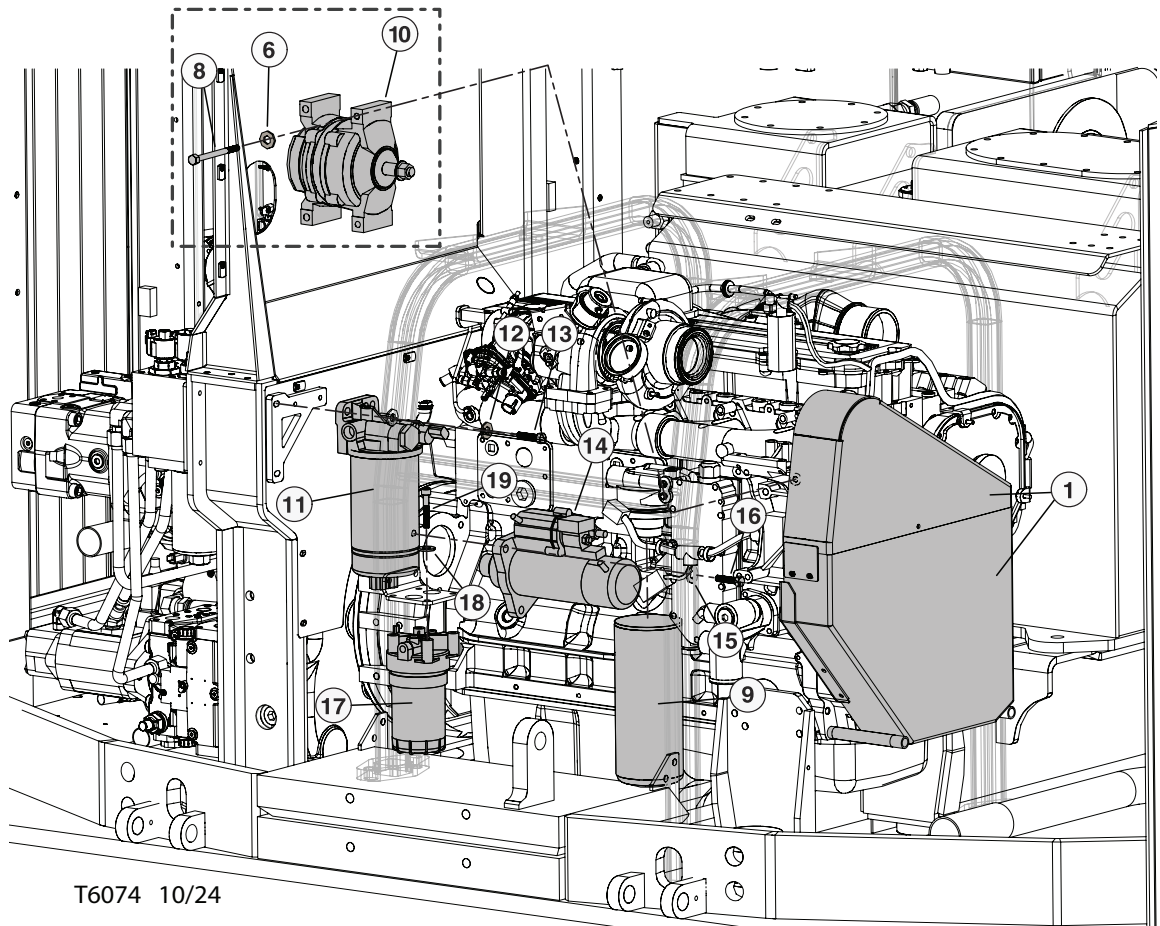
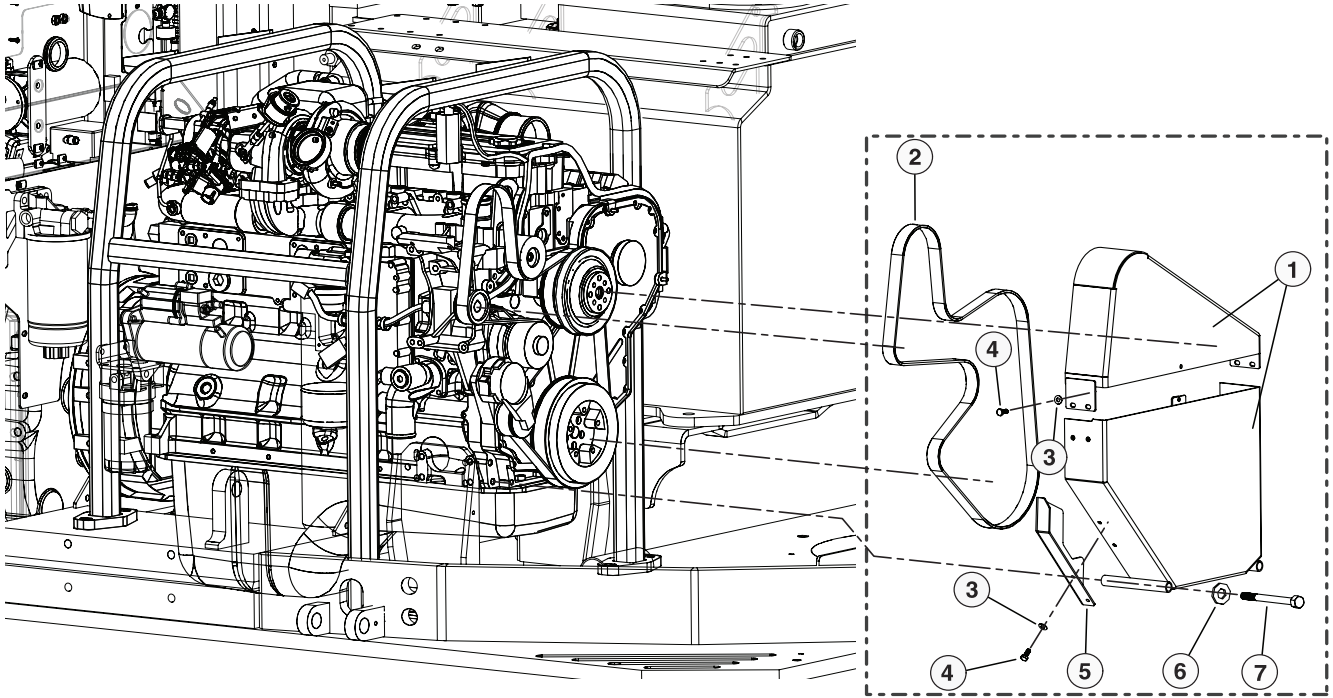


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# ENGINE PARTS AND INSTALLATION

## CUMMINS ENGINE INSTALLATION

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	60269	2	MOUNT, ENGINE - FRONT (D MODEL)	
2	66160	1	WELDMENT, ENGINE MOUNT REAR-D-MODEL-LL	
3	66165	1	WELDMENT, ENG MT INNER REAR-D-MODEL-LL	
4	60270	4	ISOLATOR, ENGINE MOUNT - D SERIES	
5	60268	8	WASHER, ENGINE MOUNT D-MOD	
6	50334	4	NUT, LOCK .875"	
7	15551	8	BOLT - 12mm-1.75P x 40mm	
8	18735	8	WASHER, FLAT - 12MM	
9	15526	8	BOLT - .625" X 2"	
10	10771	8	WASHER, SAE FLAT - .625"	
11	21540	4	BOLT - .875" X 6"	
12	10718	4	WASHER, SAE FLAT - .875"	
13	66163	1	WELDMENT, LOWER ENG BARRIER PANEL-LL	
14	66156	1	WELDMENT, FIREWALL-LL	
15	1120A212	1.5'	BULB SEAL	
16	60389	1	WELDMENT, G-BOX UPPER - D SERIES	
17	60392	1	PLATE, UPPER G-BOX 2 - D SEREIS	
18	11707	23	BOLT - .375" X 1.00"	
19	10802	23	WASHER, FLAT - .375"	
20	47206	1	RUBBER, ENGINE BARRIER PANEL	
21	47205	1	BAR, BARRIER PANEL - ENGINE	
22	15604	4	BOLT - .25" X .75"	
23	10800	4	WASHER, FLAT - .25"	
24	53760	8	1/2" LOCKWASHER KNURLED	
25	58070	1	ENGINE, CUMMINS L9 -STAGE V 390 HP TAIL	



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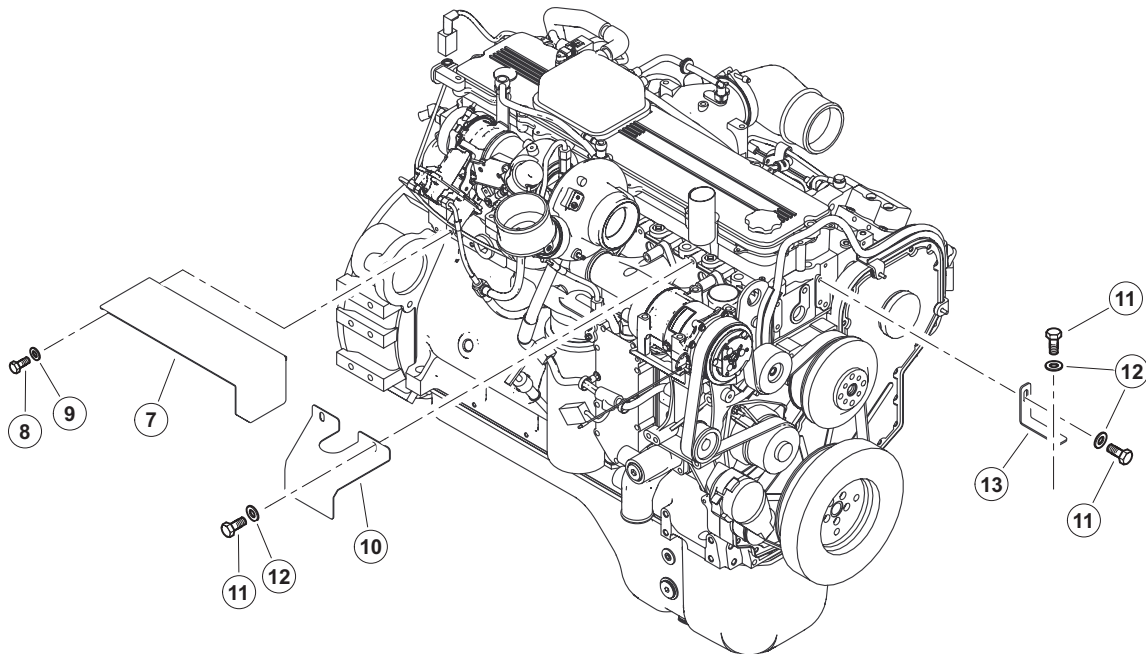
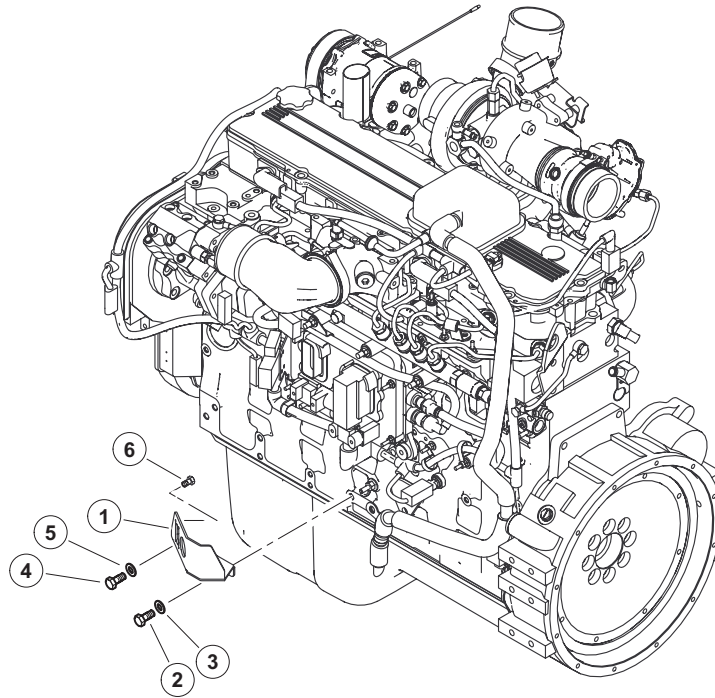
## ENGINE PARTS AND INSTALLATION

### CUMMINS L-9 STAGE V ENGINE COMPONENTS ONLY

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	60780	1	SHROUD, ENGINE BELT	
2	59058	1	BELT, FAN - ENGINE	
3	10757	7	1/4" FLAT WASHER	
4	15604	7	BOLT - .25" X .75"	
5	46288	1	SHROUD, FAN - BOTTOM	
6	18735	6	12mm Washer	
7	53110	2	BOLT - 12MM X 150MM FAN GUARD	
8	15556	4	BOLT - 12MM-1.75P X 20MM	
9	58084	1	OIL FILTER	
10	(CALL)	1	ALTERNATOR, CUMMINS	
11	58052	1	FUEL PRO FILTER - STAGE 1	
12	15528	2	WASHER, SAE FLAT - .375"	
13	10402	1	BOLT - .375" X 1.25"	
14	(CALL)	1	STARTER, CUMMINS	
15	24611	1	WASHER, FLAT - 10MM	
16	24604	1	BOLT - 10MM-1.5P X 125MM (FLANGE HEAD)	
17	58053	1	FILTER, FUEL - STAGE 2	
18	10801	4	5/16" FLAT WASHER	
19	25059	2	BOLT - 8MM-1.25P X 20MM	

# ENGINE PARTS AND INSTALLATION

## ENGINE SHIELDS



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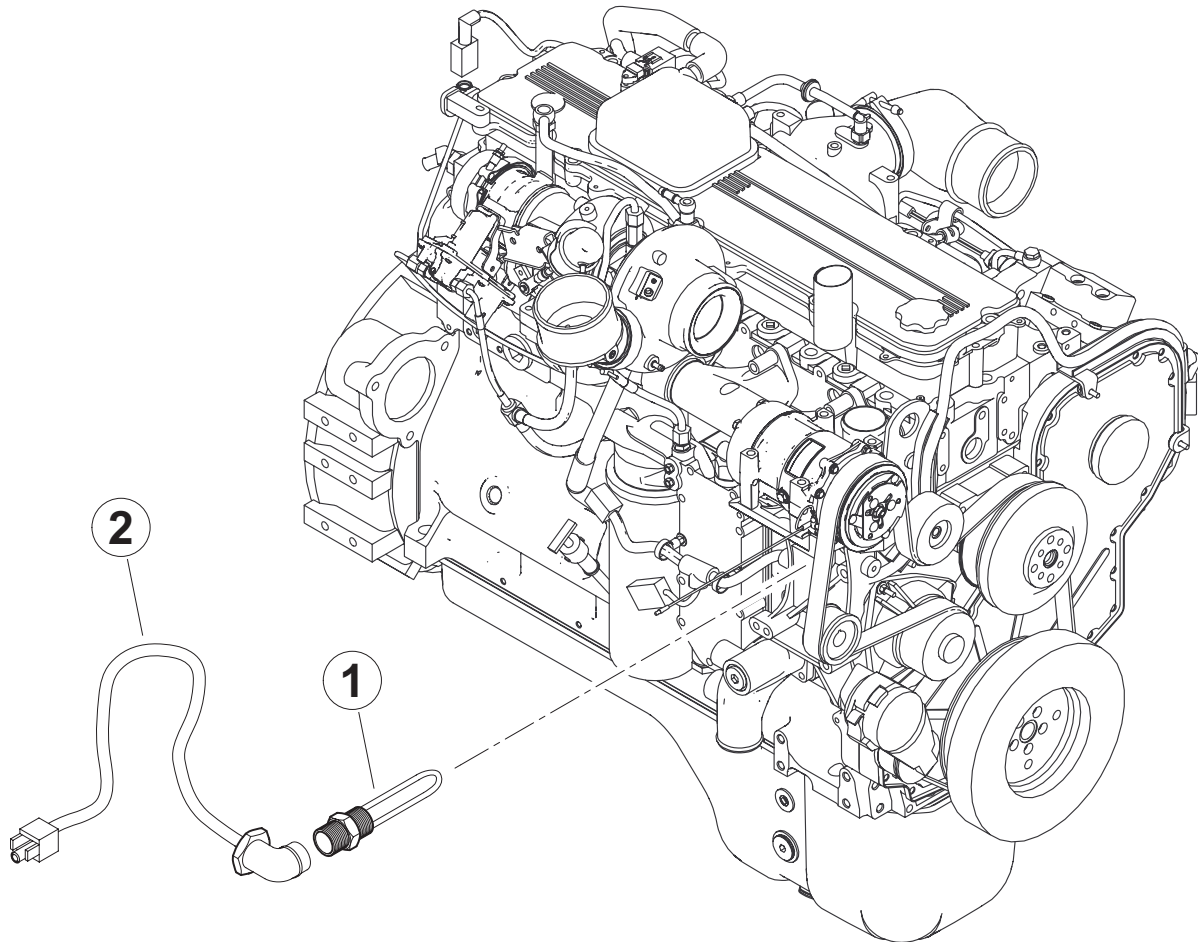
# ENGINE PARTS AND INSTALLATION

## ENGINE SHIELDS

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	60833	1	PLATE, ECM BH MOUNT	
2	15556	1	BOLT - 12MM-1.75P X 20MM	
3	18735	1	WASHER, FLAT - 12MM	
4	17395	1	BOLT - 10MM-1.5P X 20MM	
5	15528	1	WASHER, SAE FLAT - .375" OR 3/8"	
6	(CALL)	2	#10 SELF TAPPING SCREW	
7	46199	1	SHIELD, STARTER - CUMMINS	
8	25059	2	BOLT - 8MM-1.25P X 20MM	
9	15559	2	WASHER, SAE FLAT - .3125"	
10	60825	1	PANEL, HEAT SHIELD - STAGE V	
11	17395	4	BOLT - 10MM-1.5P X 20MM	
12	15528	4	WASHER, SAE FLAT - .375" OR 3/8"	
13	47416	1	PLATE, SUPPORT	

# ENGINE PARTS AND INSTALLATION

## 120V ENGINE BLOCK HEATER



B-00020D 03/24



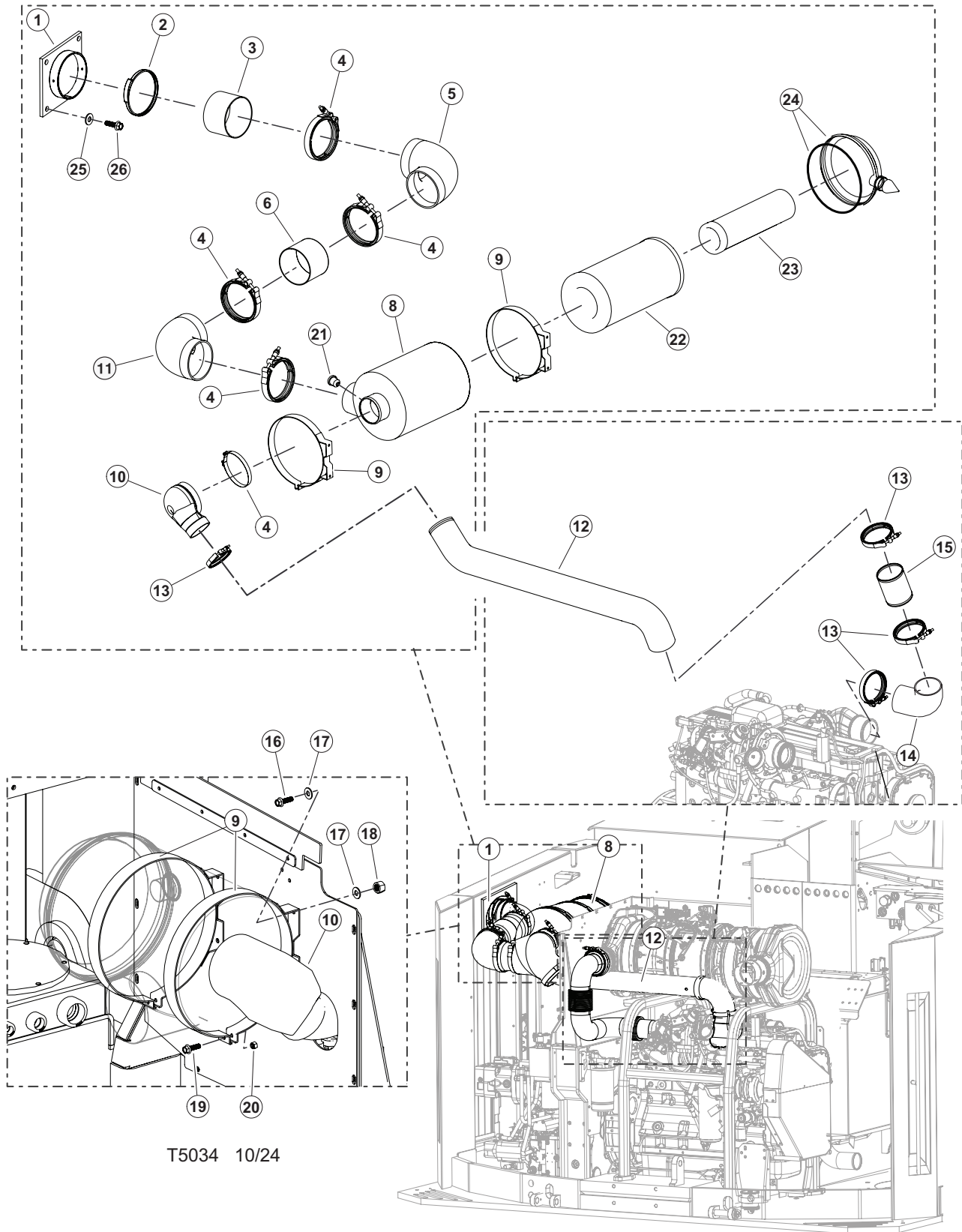
# ENGINE PARTS AND INSTALLATION

## 120V ENGINE BLOCK HEATER

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	24377	1	HEATER, ENGINE BLOCK (CUMMINS QSC-1000W)	
2	58344	1	CORD, ENGINE HEATER	

# ENGINE PARTS AND INSTALLATION

## AIR CLEANER AND AIR INTAKE TUBE INSTALLATION



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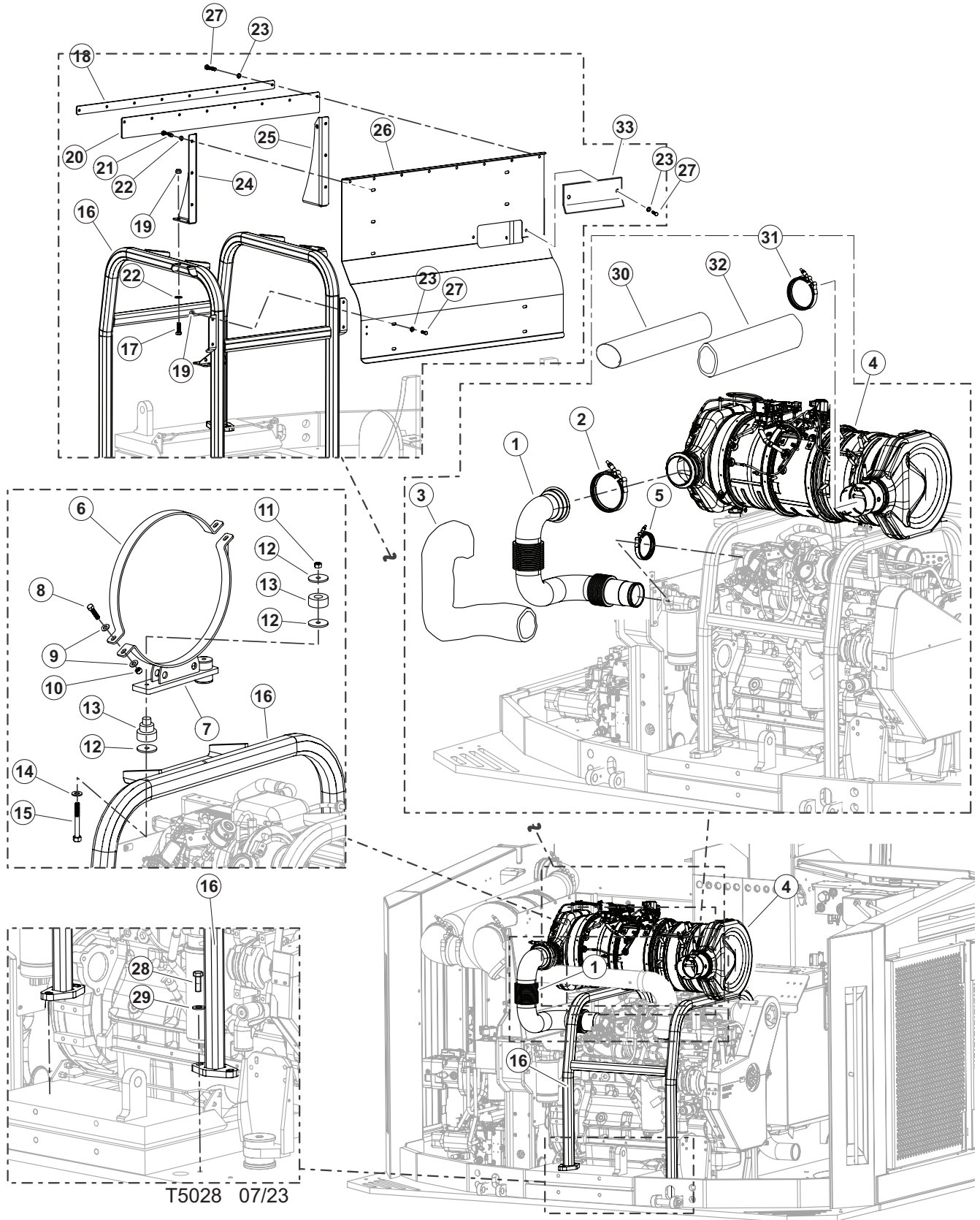
# ENGINE PARTS AND INSTALLATION

## AIR CLEANER AND AIR INTAKE TUBE INSTALLATION

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	46868	1	WELDMENT, AIR INTAKE FLANGE	
2	55498	1	CLAMP, AIR INLET	
3	60548	1	TUBE, AIR INLET - 6"	
4	16249	5	CLAMP, STRAP BAND - 5.5"	
5	57495	1	ELBOW, RUBBER 90° - 6.00" X 6.00"	
6	63303	2	TUBE, 6.00" X 11.00"	
7	55273	1	TRIM, PLENUM	
8	58136	1	AIR CLEANER ASSEMBLY	
9	58260	2	BAND, AIR CLEANER CLAMP	
10	58981	1	ELBOW, RUBBER - COBRA 6" X 4"	
11	58985	1	ELBOW, RUBBER 90° - 7.00" X 6.00"	
12	63299	1	WELDMENT, AIR INTAKE TUBE	
13	15697	4	CLAMP, STRAP BAND - 4.5"	
14	55667	1	ELBOW, RUBBER 90 AIR INTAKE-COBRA 4-5	
15	63299	1	TUBE, 4.00 X AIR CLNR TO TURBO	
16	11707	4	BOLT - .375" X 1"	
17	10802	8	3/8" WASHER	
18	10813	4	NUT, LOCK - .375"	
19	10822	2	BOLT - .3125" X 1.25"	
20	10812	2	5/16" LOCKNUT	
21	16114	1	INDICATOR, AIR CLEANER FILTER SERVICE	
22	58276	1	FILTER, AIR CLEANER - PRIMARY	
23	58277	1	FILTER, AIR CLEANER - SECONDARY	
24	58275	1	COVER, AIR CLEANER	
25	15528	4	WASHER, SAE FLAT - .375"	
26	10731	4	BOLT - .375" X 1.5"	

# ENGINE PARTS AND INSTALLATION

## STAGE V ENGINE MUFFLER AND MUFFLER MOUNT INSTALLATION ONLY



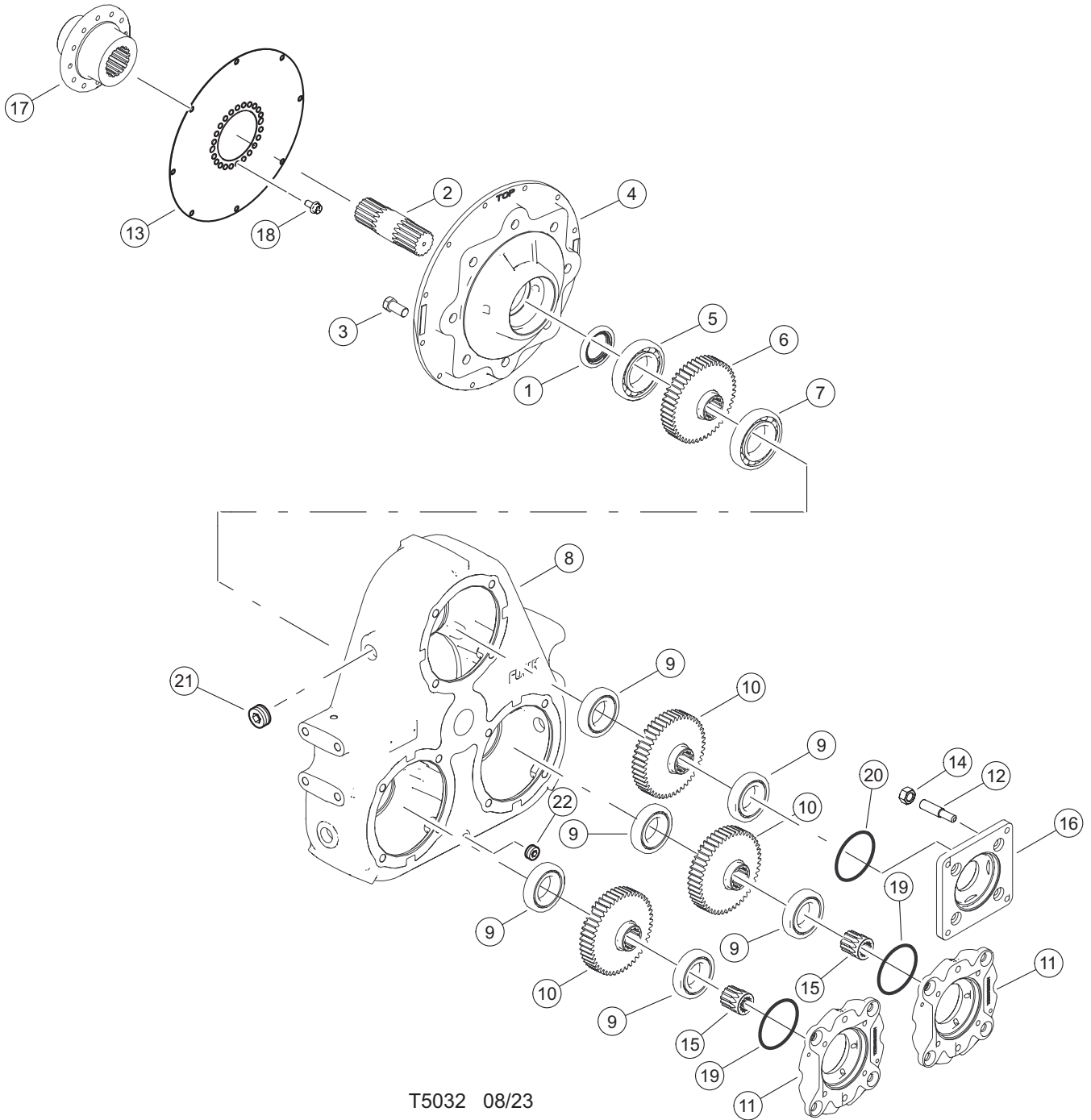
## ENGINE PARTS AND INSTALLATION

### STAGE V ENGINE MUFFLER AND MUFFLER MOUNT INSTALLATION ONLY

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	62201	1	PIPE, EXHAUST - TAIL SWING STAGE 5	
2	16249	1	CLAMP, STRAP BAND - 5.5"	
3	57841	1	INSULATION, EXHAUST PIPE - D-SERIES	
4	60375	1	MUFFLER, STAGE V ENGINE - CUMMINS	
5	20452	1	CLAMP, TURBO EXHAUST - C8.3 ELITE	
6	60381	2	STRAP, SINGLE CAN MOUNT - AFTER TREATMENT	
7	60380	2	WELDMENT, SCR MTG CLAMP - D SERIES	
8	10822	4	BOLT - .3125" X 1.25"	
9	10801	8	5/16" WASHER	
10	10812	4	5/16-18 LOCKNUT	
11	10815	4	1/2" LOCKNUT	
12	46674	12	WASHER, FENDER - ISOLATOR	
13	55560	4	ISOLATOR, RUBBER - MUFFLER - T4F	
14	10804	4	1/2" FLAT WASHER	
15	10893	4	BOLT - .5" X 3"	
16	66222	1	WELDMENT, SCR SUPPORT	
17	10402	8	BOLT - .375" X 1.25"	
18	48988	1	PLATE, SCR PANEL RUBBER HOLD DOWN	
19	10813	8	NUT, LOCK - .375"	
20	48986	1	RUBBER SHIELD	
21	15542	10	BOLT - .375" X .75"	
22	15528	10	WASHER, SAE FLAT - .375"	
23	10802	10	WASHER, FLAT - .375"	
24	48999	1	PLATE, SCR PANEL SUPPORT - LH	
25	62115	1	PLATE, SCR PANEL SUPPORT - RH	
26	62124	1	SHIELD, HEAT	
27	11707	14	BOLT - .375" X 1"	
28	15502	4	BOLT - .625" X 1.5"	
29	10805	4	WASHER, FLAT - .625"	
30	66284	1	WELDMENT, BAFFLED TAILPIPE-LL	
31	16249	1	CLAMP, STRAP BAND - 5.5"	
32	66341	1	HEAT BLANKET, TAILPIPE	
33	62125	1	PLATE, VALVE ACCESS COVER	

# ENGINE PARTS AND INSTALLATION

## PUMP DRIVE TRANSMISSION BREAKDOWN



# ENGINE PARTS AND INSTALLATION

## PUMP DRIVE TRANSMISSION BREAKDOWN

REF	PART #	QTY	DESCRIPTION	SEE SECTION
*	58980	1	TRANSMISSION, TRIPLE PUMP DRIVE (2000 rpm)	
1	18027	4	SEAL	
2	18388	1	SHAFT	
3	(CALL)	8	FASTENER	
4	(CALL)	1	COVER, engine adapter housing (See Note #2 Below)	
5	18891	1	BEARING	
6	57766	1	CENTER GEAR	
7	18892	1	BEARING	
8	(CALL)	1	HOUSING	
9	(CALL)	6	BEARING	
<b>(MUST VERIFY INPUT GEARS USED ON MACHINE)</b>				
10	57766	3	INPUT GEAR - <b>(STANDARD)</b>	
10	<b>57766</b>	2	INPUT GEAR - <b>(STANDARD) (2 USED IF MACHINE HAS 65388 LONG NOSE INPUT GEAR)</b>	
10	65388	1	INPUT GEAR - <b>(LONG NOSE) (USED IF IMPLEMENT PUMP HAS SHORT SHAFT)</b>	
11	54767	2	COVER, BOTTOM	
12	18293	4	THREADED STUD	
13	18028	1	DRIVE PLATE	
14	(CALL)	4	NUT	
15	16330	2	ADAPTOR SLEEVE	
16	57898	1	PAD, PUMP DRIVE BOX - REXROTH 175CC IMP	
17	(CALL)	1	PINION FLANGE YOKE	
18	(CALL)	12	FASTENER	
19	(CALL)	2	GASKET	
20	(CALL)	1	GASKET	
21	(CALL)	4	PLUG	
22	(CALL)	1	PLUG, DRAIN	

**Note #1:**

Use Loctite 272 (blue) during installation.

**Note #2:**

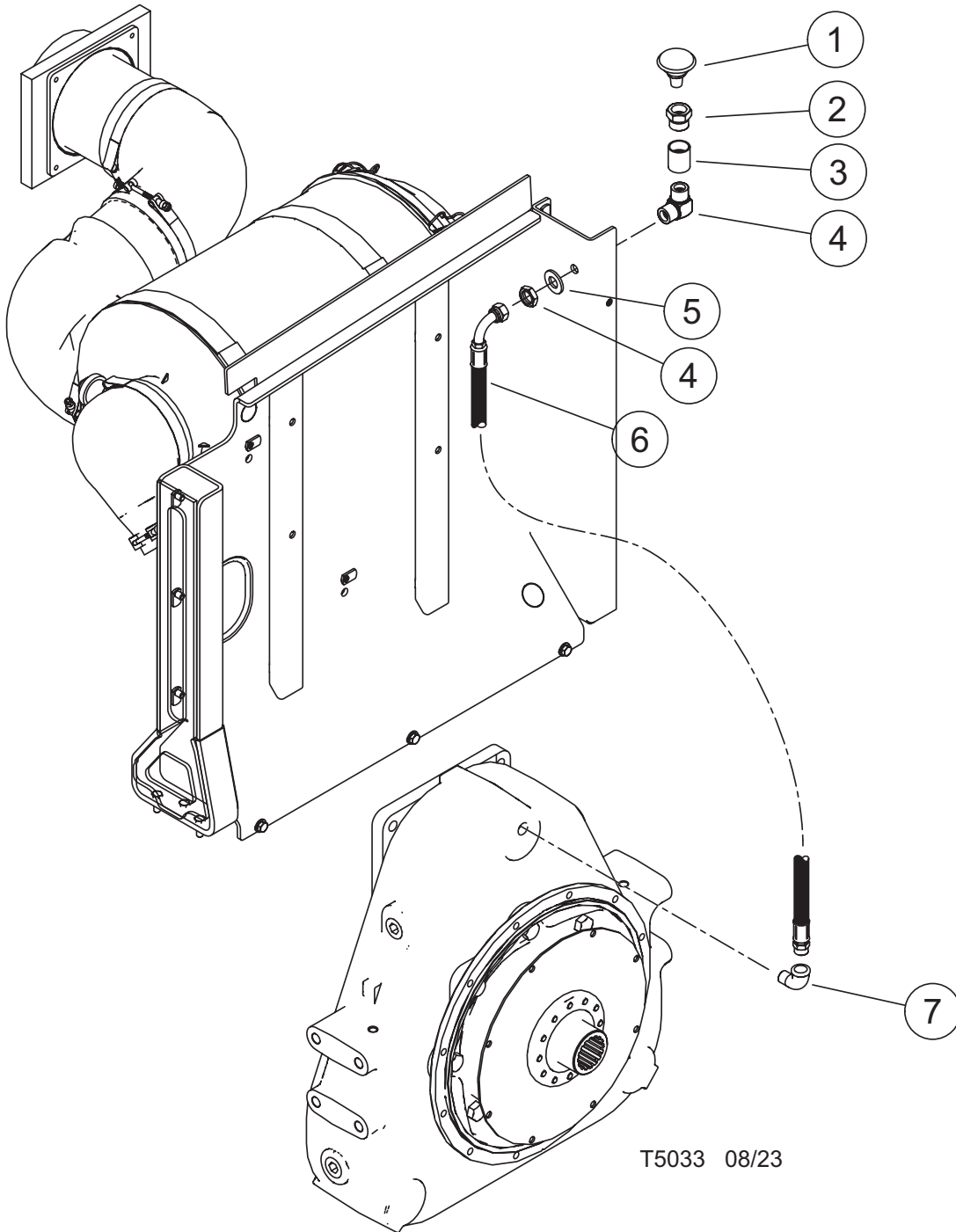
Use Silicone sealant during installation.

**Note #3:**

Use teflon sealant during installation.

# ENGINE PARTS AND INSTALLATION

## PUMP DRIVE TRANSMISSION BREATHER



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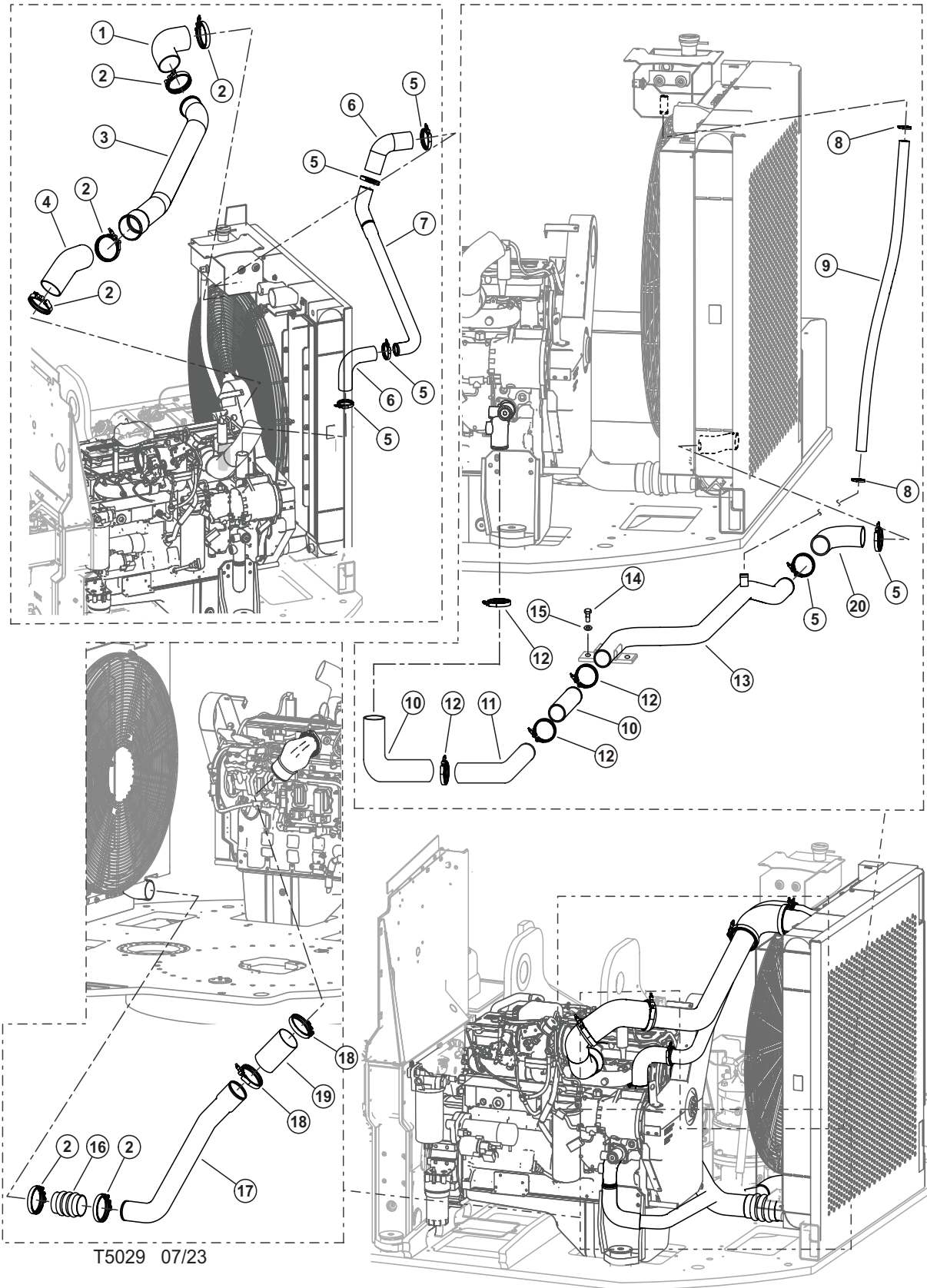
## ENGINE PARTS AND INSTALLATION

### PUMP DRIVE TRANSMISSION BREATHER

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	21304	1	VENT AP	
2	11318	1	BUSHING, REDUCER - 5406-6-4	
3	57422	1	FITTING, 6-6 G6X-S	
4	55347	1	FITTING, ELBOW - BULKHEAD 6 WETX-WLN-S	
5	(CALL)	1	5/8" TRU TORQ, EXTRA THICK FLAT WASHER: 15/64" THICK, 21/32" ID, 1 5/16" OD	
6	(See Description)	1	HOSE, <b>Supplier Part # 387TC 38 06-06JS-06J9</b> (Triple Drive Vent Hose)	
7	16251	1	ELBOW, 90 STREET - 5502-4	

# ENGINE PARTS AND INSTALLATION

## ENGINE CHARGE AIR - AIR TO AIR CONNECTIONS AND INSTALLATION



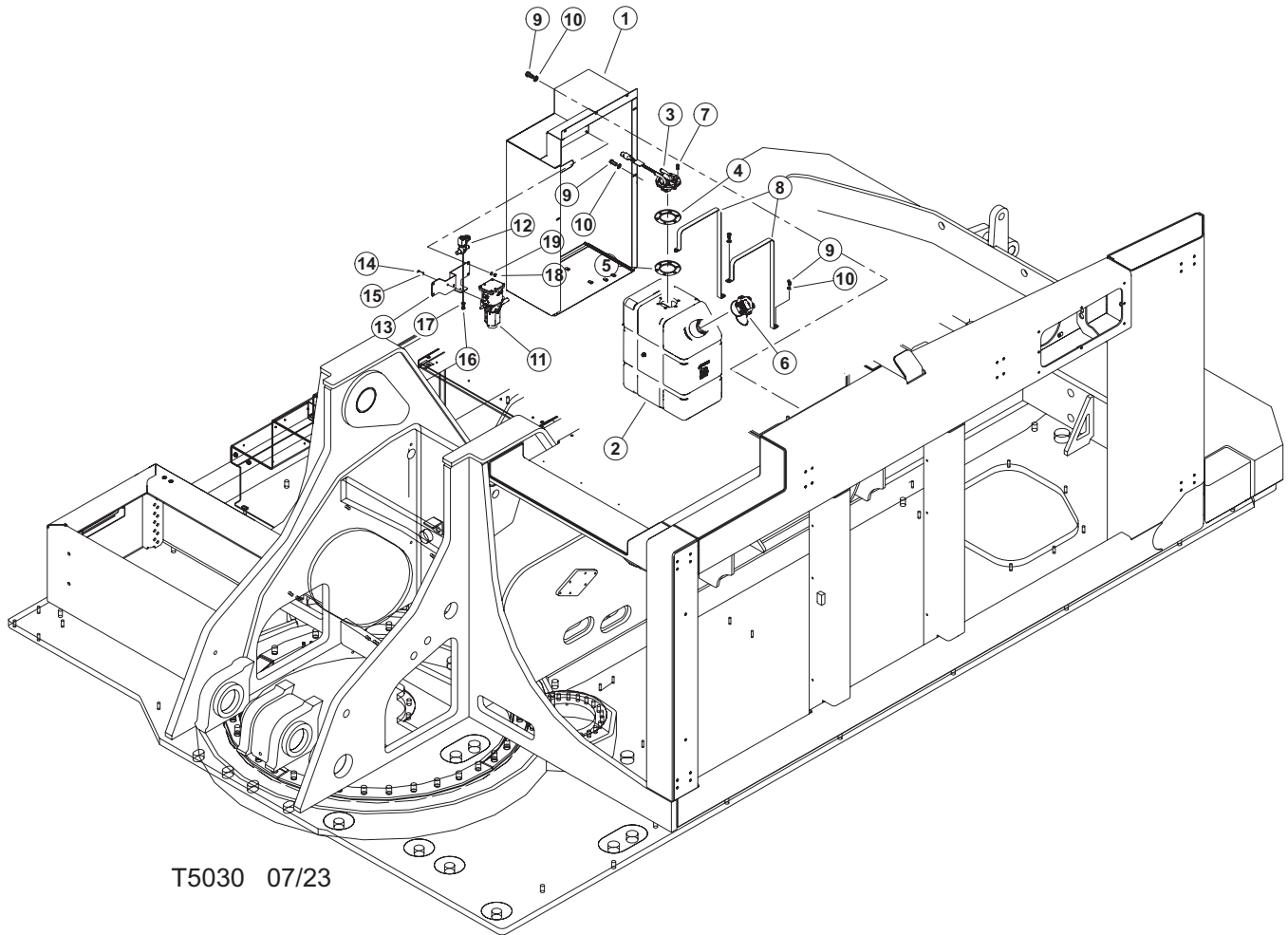
# ENGINE PARTS AND INSTALLATION

## ENGINE CHARGE AIR - AIR TO AIR CONNECTIONS AND INSTALLATION

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	52753	1	ELBOW, 90 - 3.5" X 6" SILICONE	
2	52862	6	CLAMP, spring hose - 4" (Supplier #3926703)	
3	58960	1	TUBE, UPPER CAC TO MANIFOLD	
4	52729	1	ELBOW, 48 - 4" BOOT (AIR TO AIR)	
5	18103	2	CLAMP, CONSTANT TORQUE - #40	
6	57992	1	HOSE, RADIATOR - D-SERIES	
7	48583	1	TUBE, UPPER COOLANT LINE-TAIL SWING	
8	15629	2	CLAMP, HOSE - WORM STYLE - 1.5"	
9	(CALL)	1	HOSE	
10	57992	2	HOSE, RADIATOR - D-SERIES	
11	48582	1	TUBE, LOWER COOLANT LINE-TAIL SWING	
12	18104	4	CLAMP, CONSTANT TORQUE - #36	
13	48582	1	TUBE, LOWER COOLANT LINE-TAIL SWING	
14	15589	2	BOLT - .3125" X 1.00"	
15	10801	2	WASHER, FLAT - .3125"	
16	52861	1	HOSE, HUMP - SILICONE (3 WIRE CUMMINS)	
17	66354	1	TUBE, BOTTOM CAC - ENGINE CA IN	
18	15697	2	CLAMP, STRAP BAND - 4.5"	
19	55646	1	HOSE, AIR TO AIR - CUMMINS - 4" X 4" STR	
20	58149	1	HOSE, RAD 90 DEG D-MOD 2 1/2 ID	

# ENGINE PARTS AND INSTALLATION

## CUMMINS STAGE V ENGINE DEF TANK ASSEMBLY AND INSTALLATION



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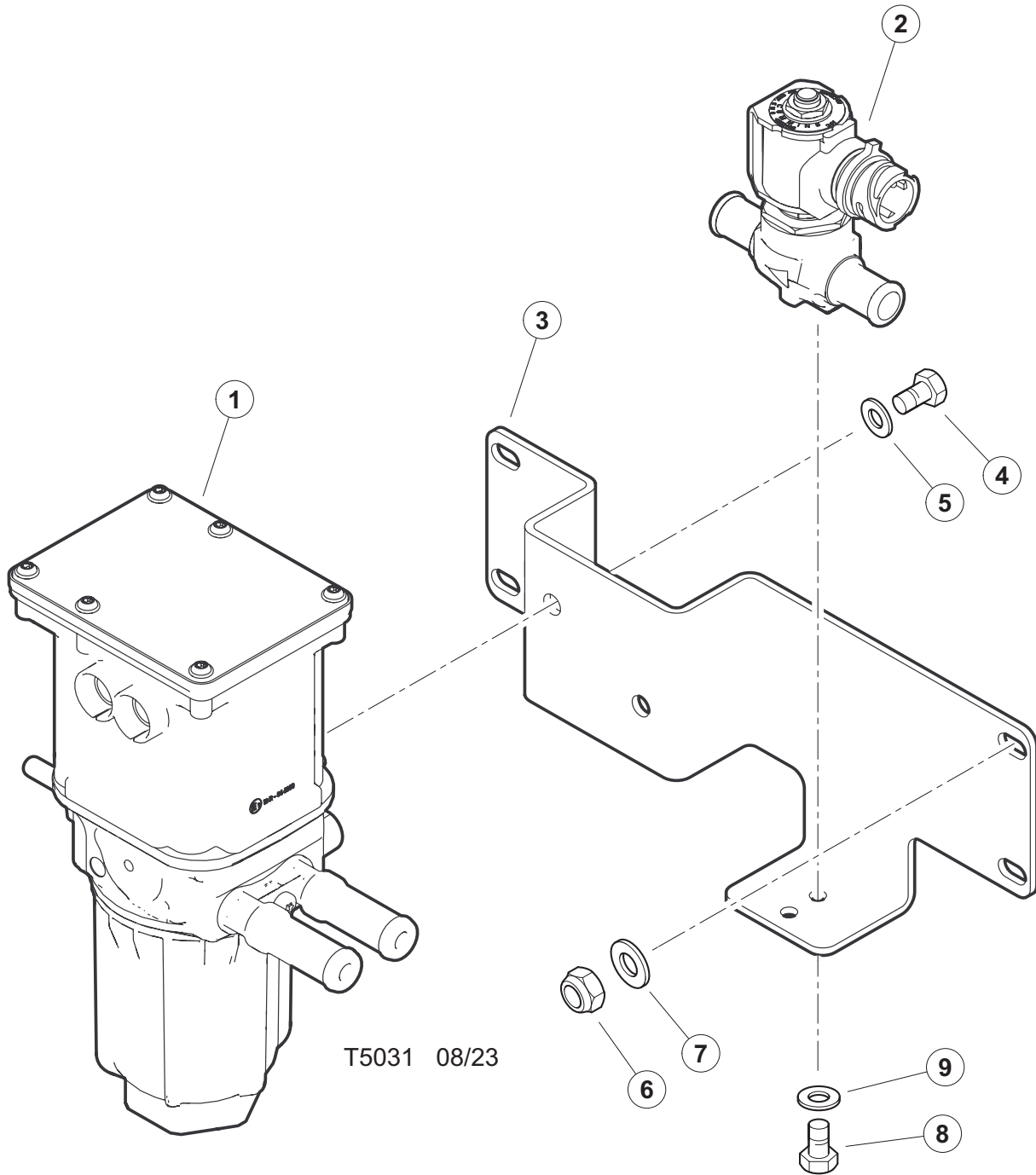
# ENGINE PARTS AND INSTALLATION

## CUMMINS STAGE V ENGINE DEF TANK ASSEMBLY AND INSTALLATION

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	66195	1	WELDMENT, DEF COMPARTMENT	
2	(CALL)	1	DEF TANK ASSM.	
3		1	HEAD, DEF TANK	
4		2	PLATE, CLAMPING	
5		1	GASKET	
6		1	CAP, DEF TANK	
7	(CALL)	6	BOLT	
8	66198	2	STRAP, DEF TANK MTG-CUMMINS-LL	
9	11707	4	BOLT - .375" X 1.00"	
10	10802	4	WASHER, FLAT - .375"	
11	60414	1	PUMP, BOSCH UL2 DOSER	
12	60412	1	VALVE, STAGE 5 CUMMINS - WATER	
13	48984	1	PLATE, DEF DOSER MTG STAGE V	
14	(CALL)	2	BOLT - M8-1.25 X 20MM	
15		2	WASHER, FLAT - M8	
16		2	BOLT - M5-0.8 X 20MM	
17	(CALL)	2	WASHER, FLAT - M5	
18	10812	2	NUT, LOCK - .3125"	
19	15559	2	WASHER, SAE FLAT - .3125"	

# ENGINE PARTS AND INSTALLATION

## CUMMINS STAGE V ENGINE DEF DOSER PUMP & WATER VALVE



# ENGINE PARTS AND INSTALLATION

## CUMMINS STAGE V ENGINE DEF DOSER PUMP & WATER VALVE

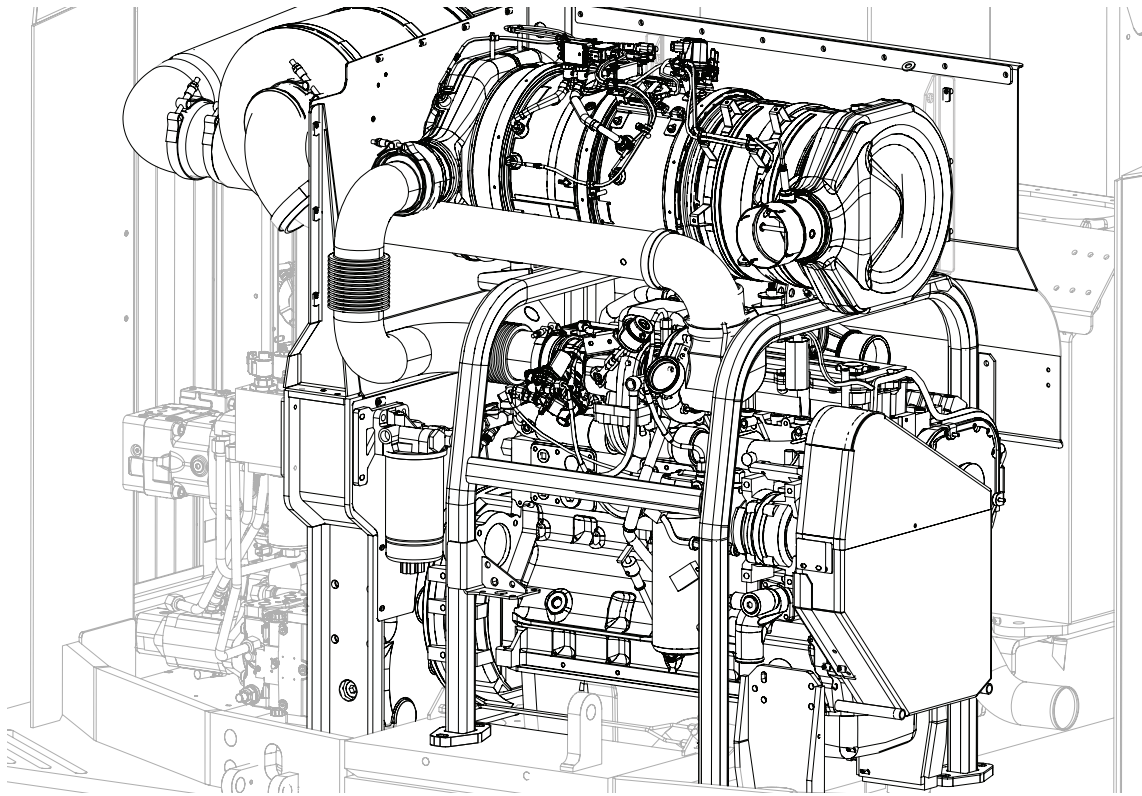
REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	60414	1	PUMP, BOSCH UL2 DOSER	
2	60412	1	VALVE, STAGE 5 CUMMINS - WATER	
3	48984	1	PLATE, DEF DOSER MTG STAGE V	
4	(CALL)	2	BOLT - M8-1.25 X 20MM	
5	(CALL)	2	WASHER, FLAT - M8	
6	10812	2	NUT, LOCK - .3125"	
7	15559	2	WASHER, SAE FLAT - .3125"	
8	(CALL)	2	BOLT - M5-0.8 X 20MM	
9	(CALL)	2	WASHER, FLAT - M5	





## **SECTION EE-2**

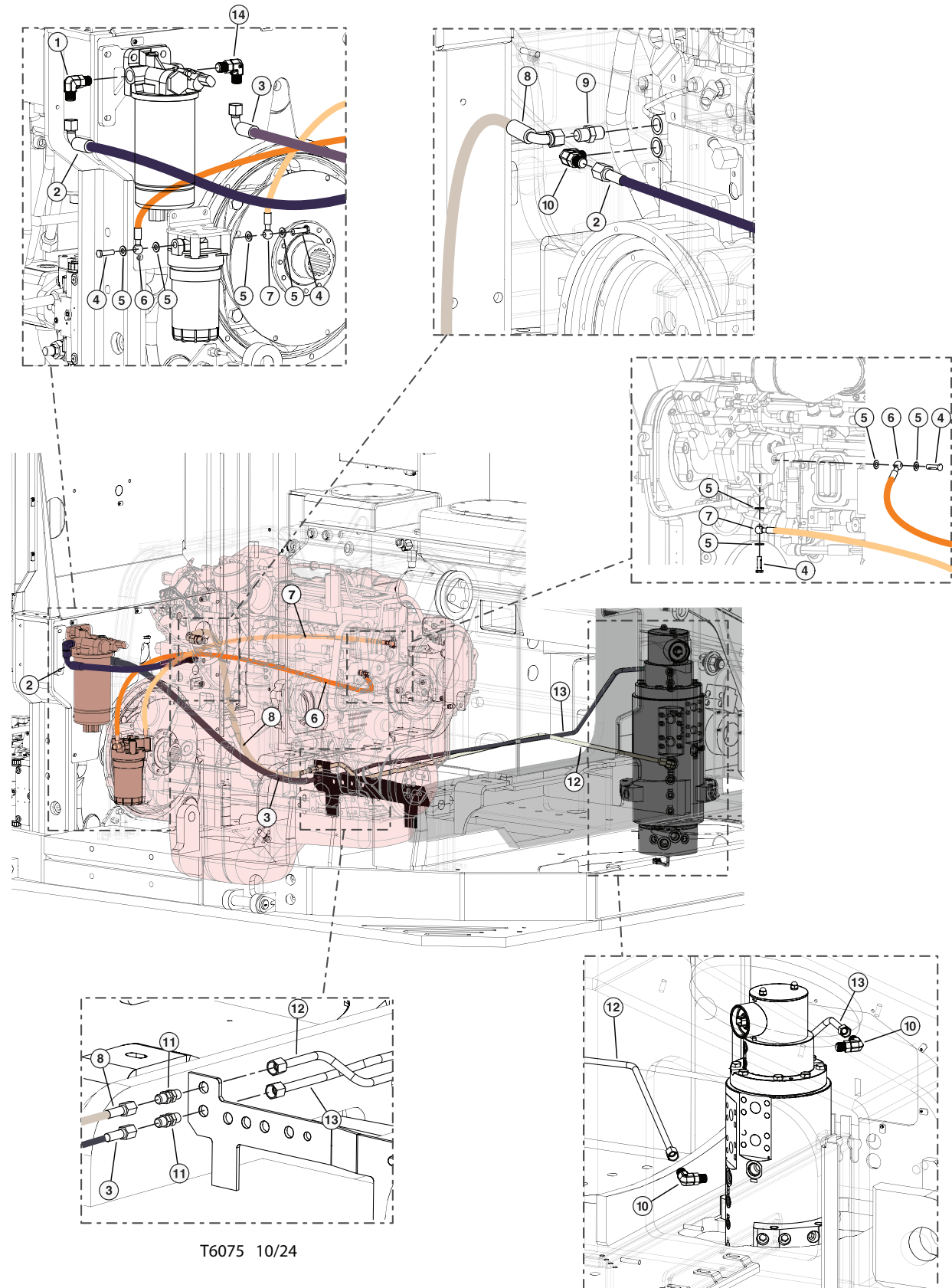
### **CUMMINS L9 STAGE V (390 HP) FUEL & DEF SYSTEM**



**CUMMINS L9 STAGE V ENGINE (390 HP)**

# ENGINE SYSTEM INSTALLATION & ASSEMBLY

## CUMMINS L9 STAGE V FUEL LINES



# ENGINE SYSTEM INSTALLATION & ASSEMBLY

## CUMMINS L9 STAGE V FUEL LINES

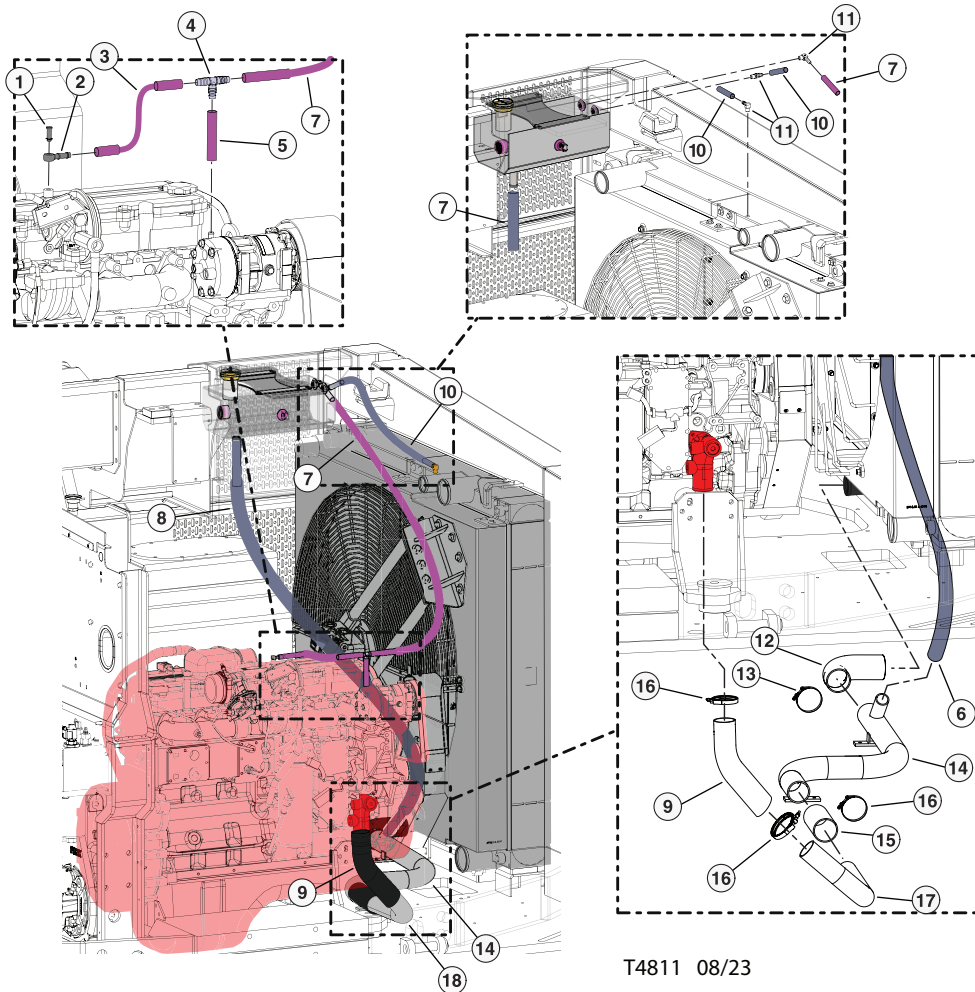
REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	55347	1	FITTING, ELBOW - BULKHEAD 6 WETX-WLN-S	
2	(See Description)	1	HOSE ASSEMBLY - 221FR25-06-06JS-06J9	
3	(See Description)	1	HOSE ASSEMBLY - 221FR64-06-06JS-06J9	
4	FASTENER	4	(CONTACT YOUR CUMMINS DEALER FOR REPLACEMENT PART)	
5	WASHER	8	(CONTACT YOUR CUMMINS DEALER FOR REPLACEMENT PART)	
6	HOSE	1	(CONTACT YOUR CUMMINS DEALER FOR REPLACEMENT PART)	
7	HOSE	1	(CONTACT YOUR CUMMINS DEALER FOR REPLACEMENT PART)	
8	(See Description)	1	HOSE ASSEMBLY - 221FR39-06-06JS-06J9	
9	53103	3	FITTING, 6-8 - ORB-JIC	
10	53103	1	FITTING, 6-8 - ORB-JIC 830-B	
11	55385	2	FITTING, BULKHEAD - 8 WTX-WLN-S	
12	57274	1	TUBELINE, RM FS TO FUEL SUPPLY BULKHEAD	
13	57273	1	TUBELINE, RM FR TO FUEL RETURN BULKHEAD	
1	53073	1	ELBOW, 90 6-JIC X 10-ORB	

**NOTE:**

Parts listed are consistent for CUMMINS L9 - STAGE V (390 HP) engine ONLY.

# ENGINE SYSTEM INSTALLATION & ASSEMBLY

## CUMMINS L9 STAGE V ENGINE COOLANT LINES



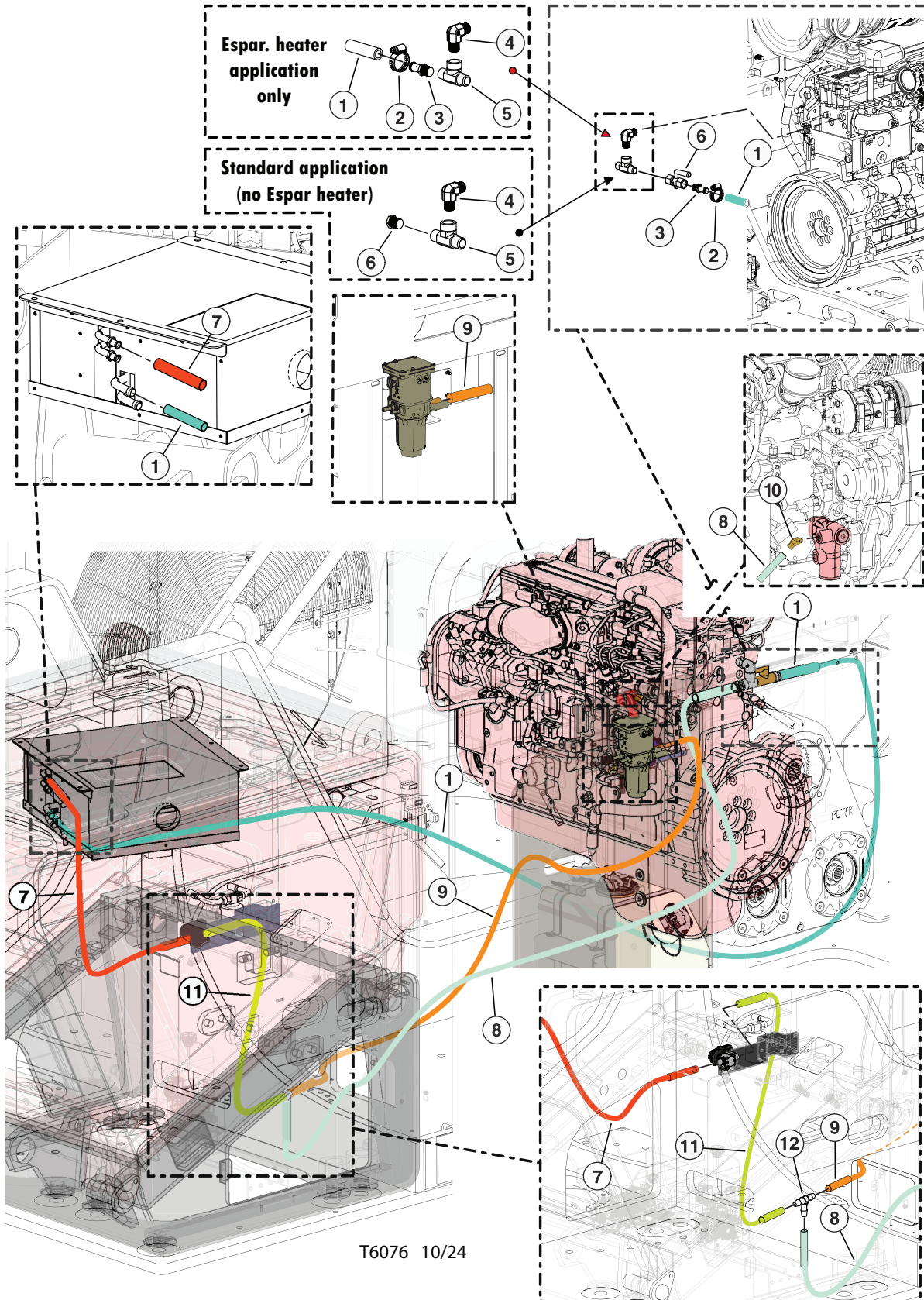
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REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	BOLT	1	(CONTACT YOUR CUMMINS DEALER FOR REPLACEMENT PART)	
2	BANJO FITTING	1	(CONTACT YOUR CUMMINS DEALER FOR REPLACEMENT PART)	
3	55411	1	HOSE, COOLENT - 3/8" LF - 50'-0" (Banjo Fitting to Tee)	
4	57902	1	TEE, HOSE BARB - 3/8"	
5	55411	1	HOSE, COOLENT - 3/8" LF - 50'-0" (Engine to Tee)	
6	(See Description)	1	HOSE	
7	55411	1	HOSE, COOLENT - 3/8" LF - 50'-0" (Tee to Burp Tank)	
8	55626	1	HOSE, HEATER - BURP TANK	
9	57992	1	HOSE, RADIATOR - D-SERIES)	
10	55411	1	HOSE, COOLENT - 3/8" LF - 50'-0" (Radiator to Surge Tank)	
11	52586	4	ELBOW, 90 MALE HOSE BARB 6-4	
12	58149	2	HOSE, RAD 90 DEG D-MOD 2 1/2 ID	
13	18103	2	CLAMP, CONSTANT TORQUE - #40	
14	48582	1	TUBE, LOWER COOLANT LINE-TAIL SWING (2 pcs per assm.)	
15	57992	1	HOSE, RADIATOR - D-SERIES	
16	18104	2	CLAMP, CONSTANT TORQUE - #36	
17	48582	1	TUBE, LOWER COOLANT	

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# ENGINE SYSTEM INSTALLATION & ASSEMBLY

## CUMMINS L9 STAGE V HEATER LINES



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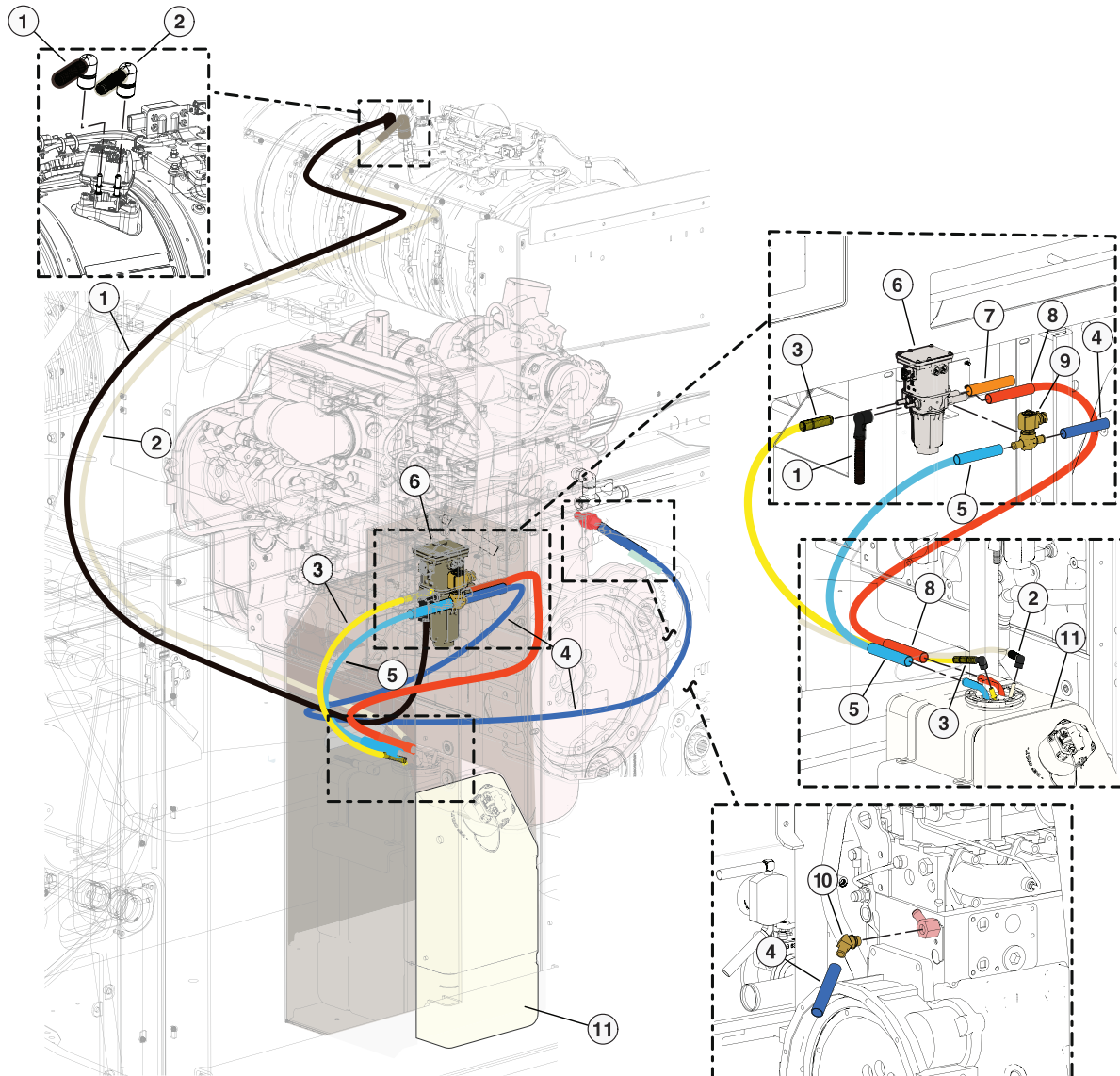
# ENGINE SYSTEM INSTALLATION & ASSEMBLY

## CUMMINS L9 STAGE V HEATER LINES

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	58024	1	HOSE, HEATER - 5/8" X 64" LF (Engine to AC Heater Unit)	
2	16256	20	CLAMP, HOSE - WORM STYLE - 1"	
3	51774	2	CONNECTOR, STR HOSE BARB - .5 X 5/8	
4	52785	1	ELBOW, MALE PIPE - 3/4 X 1/2 CR-S	
5	51879	1	TEE, RUN - .5" (1/2 MRO-S)	
6	51714	1	VALVE, BALL - WATER SHUT OFF HEATER 1/2"	
7	58024	1	HOSE, HEATER - 5/8" X 64" LF (AC Heater to Water Valve)	
8	(CALL)	AR	5/8" Heater Hose (Engine to Espar Unit)	
9	58024	1	HOSE, HEATER - 5/8" X 64" LF (Doser Pump to Tee at Riser)	
10	57805	1	FITTING, 179HB-10-8	
11	58024	1	HOSE, HEATER - 5/8" X 64" LF (Water Valve to Tee at Riser)	
12	57903	1	TEE, HOSE BARB - 5/8" PIPE	

# ENGINE SYSTEM INSTALLATION & ASSEMBLY

## CUMMINS L9 STAGE V DEF SYSTEM LINES

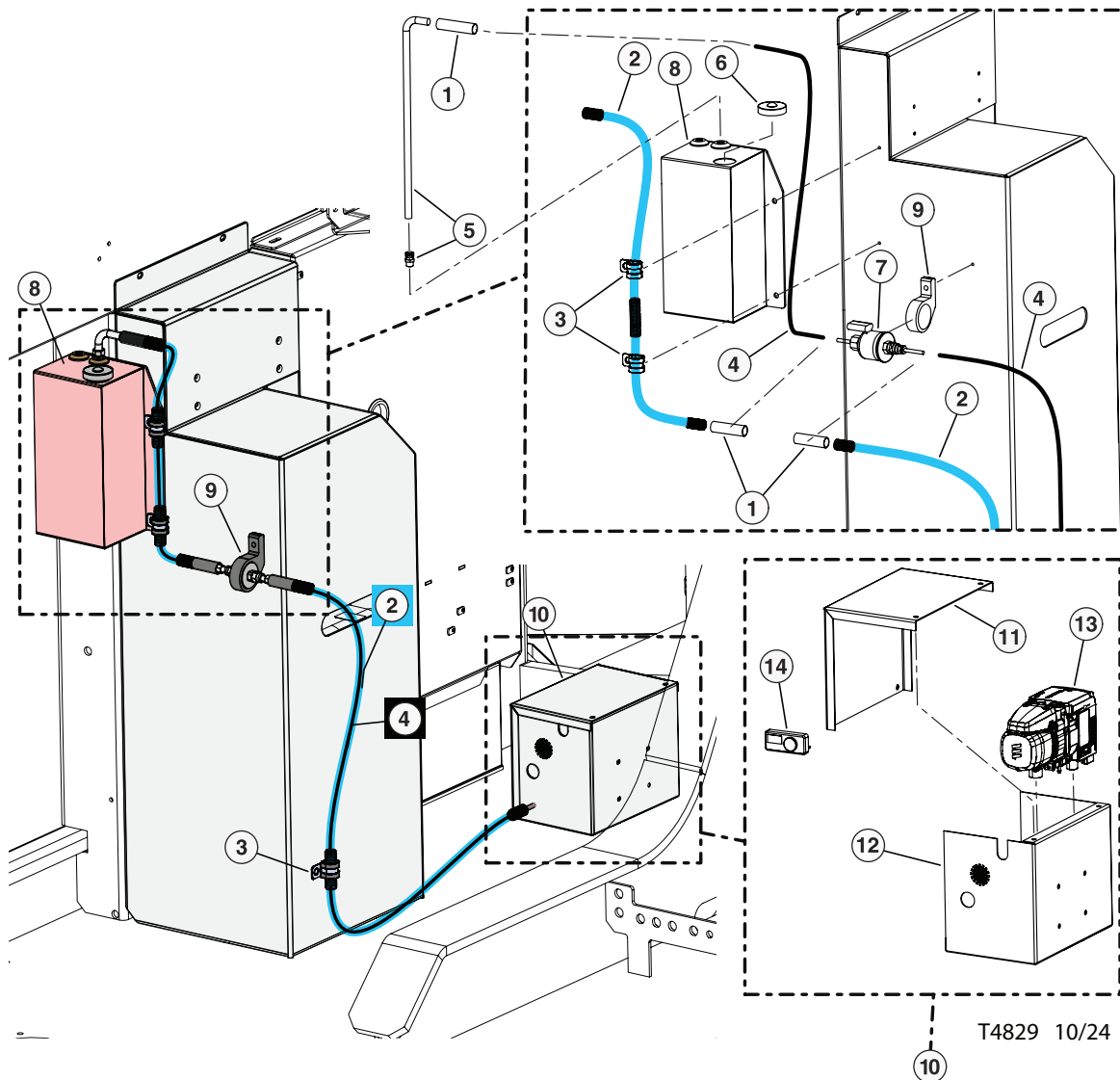


REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	(CALL)	1	HOSE, DEF RETURN (RED)	
2	(CALL)	1	HOSE, DEF SUPPLY (WHITE)	
3	(CALL)	1	HOSE, EXHAUST LINE (YELLOW)	
4	58024	1	HOSE, HEATER - 5/8" X 64" LF (Doser Pump to Engine)	
5	58024	1	HOSE, HEATER - 5/8" X 64" LF (Coolant Control Valve to DEF Tank)	
6	(CALL)	1	PUMP, DOSER	
7	(CALL)		HOSE, HEATER	
8	58024	1	HOSE, HEATER - 5/8" X 64" (DEF Tank to Doser Pump)	
9	(CALL)	1	VALVE, COOLANT CONTROL	
10	57805	1	FITTING, 179HB-10-8	
11	(CALL)	1	TANK, DEF 15 GAL.	
*	16256	20	CLAMP, HOSE - WORM STYLE - 1"	



# ENGINE SYSTEM INSTALLATION & ASSEMBLY

## PRE-HEATER (ESPAR) FUEL LINES



REF	PART #	QTY	DESCRIPTION	SEE SECTION
2	(CALL)	Lin.Ft	Wrap, Hose)	
3	16203	3	CLAMP, HOSE - COATED STRAP - .375/.25SD	
5	(CALL)	1	Fuel Sender	
6	52965	1	CAP, WEBASTO/ESPAR FUEL TANK-REPAIR	
8	46673	1	TANK, ESPAR FUEL - C/D SERIES	
10	61249	1	PREHEATER, ESPAR KIT (Items below Included)	
1	(CALL)	1	Hose, Rubber	
4	(CALL)	1	Fuel Hose, Plastic	
7	(CALL)	1	Fuel Pump, P53	
9	(CALL)	1	Fuel Pump Mount, Rubber	
11	60727	1	LID, ESPAR	
12	60726	4	BOX, ESPAR MOUNT	
13	(CALL)	1	Heater Motor	
14	(CALL)	1	Eberspacher Heater Controller	

