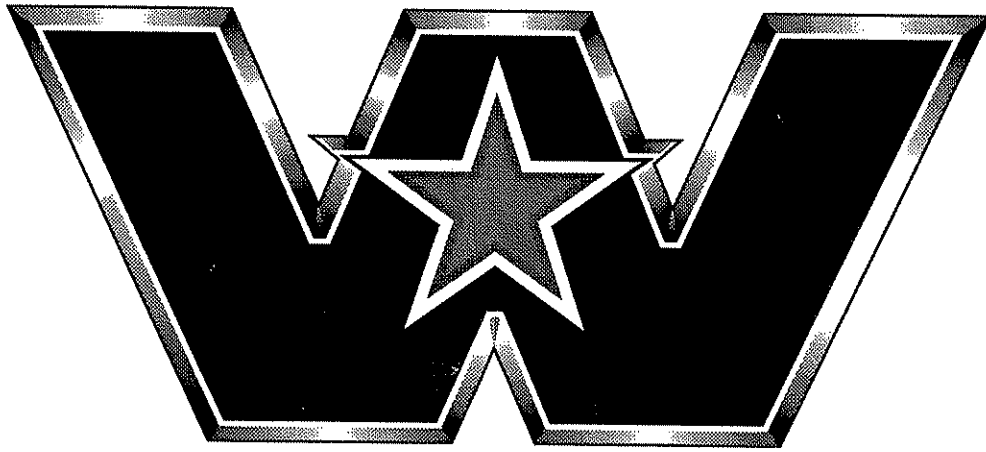


COOLING SYSTEM

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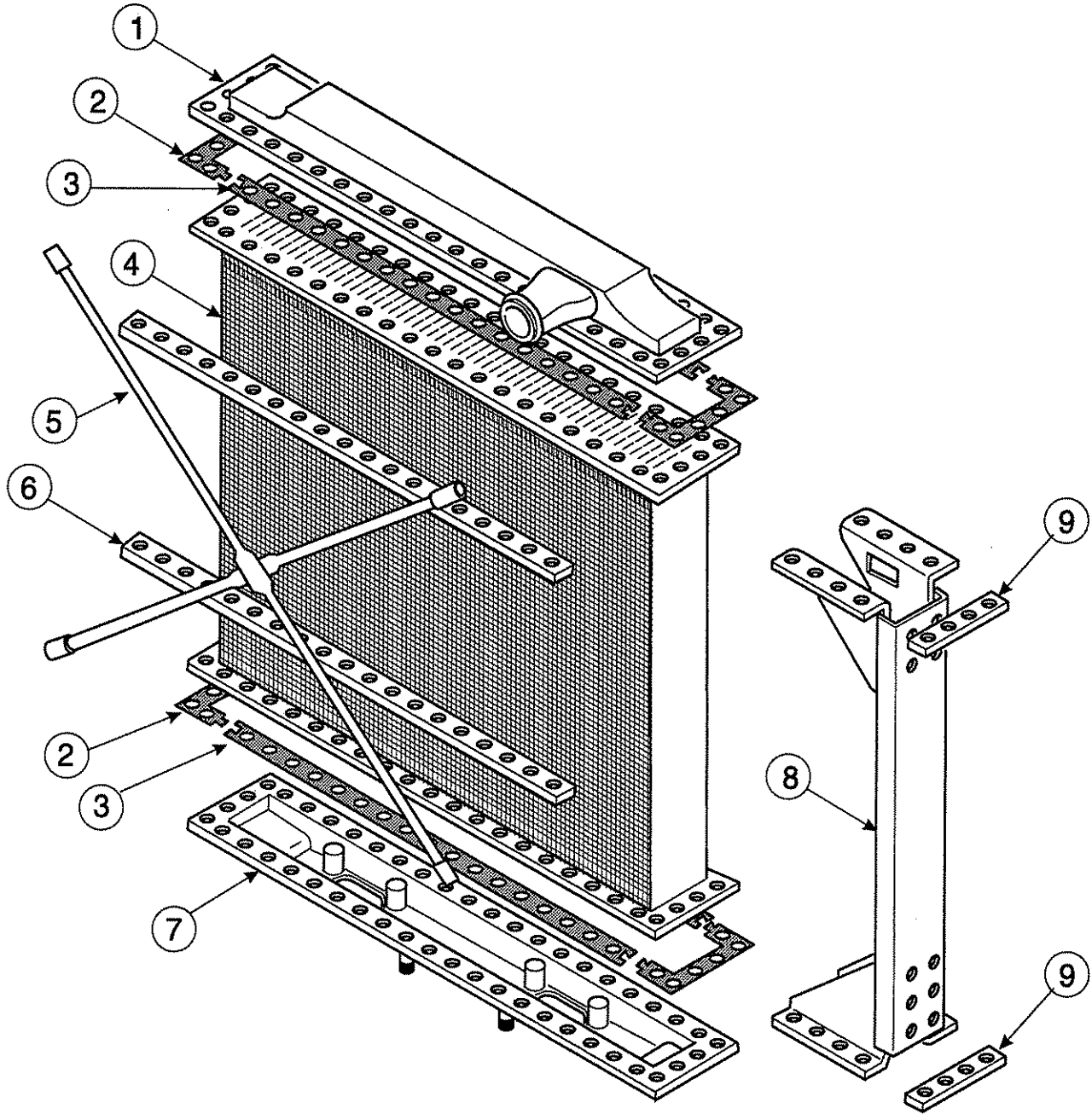
RADIATOR ASSEMBLY BREAKDOWNS

8.1

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Note: This publication is a generic parts book. Components may vary with different applications. For applications other than listed at the bottom of the page, see the appropriate Bill of Material by truck serial number, and use this publication as a guide



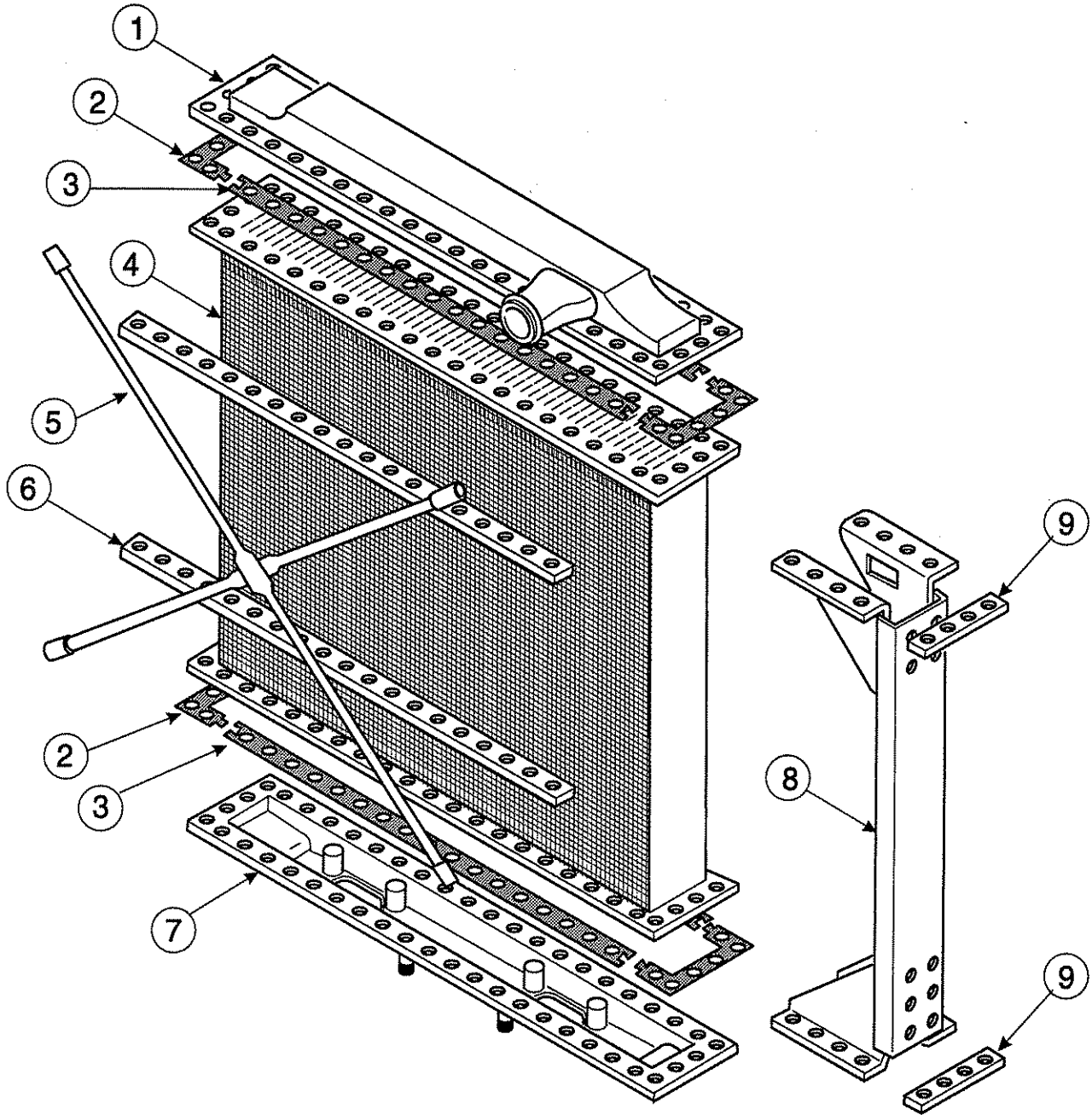
1100 HIGH FLOW RADIATOR BREAKDOWN

Note: All 1100 High Flow Radiators are superseded to the 1100 High Flow 4 Row Severe Service Radiator. In addition all 1100 High Flow Radiator Cores are superseded to the 1100 High Flow 4 Row Core.

Radiator Assembly, 1100 High Flow, 4 Row, Severe Service 20001-3468-SS

Item	Description	Part Number	Qty
1	Top Tank	3S38734	1
2	Gasket, Ends	5S35455	4
3	Gasket, Strip	5S35456	4
4	Core and Header	3S38188	1
5	Cross Bar Assembly	3S41706	1
6	Bolting Bar, Front & Back	5S35450	4
7	Tank Assembly, Bottom	3S44586	1
8	Side Assembly	3S38254	2
9	Bolting Bar, Ends	5S44420	4

Specific BOMs listed: 3058-001-01/07



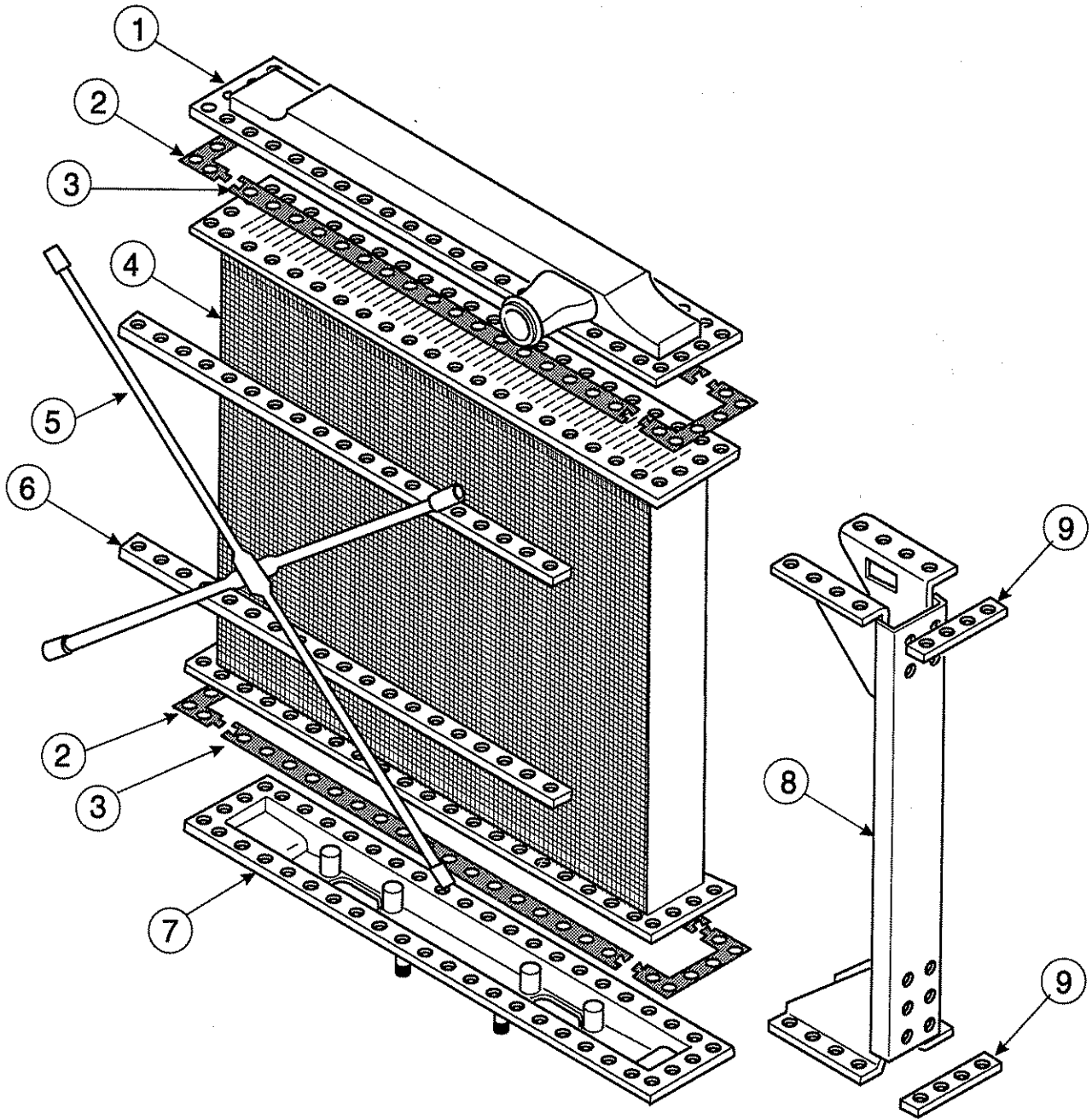
1200 HIGH FLOW RADIATOR BREAKDOWN

Note: All 1200 High Flow Radiators are superceded to the 1200 High Flow 4 Row Severe Service Radiator. In addition all 1200 High Flow Radiator Cores are superced to the 1200 High Flow 4 Row Core.

Radiator Assembly, 1200 High Flow, 4 Row, Severe Service 20001-3480-SS

Item	Description	Part Number	Qty
1	Top Tank	3S38734	1
2	Gasket, Ends	5S35455	4
3	Gasket, Strip	5S35456	4
4	Core and Header	3S38190	1
5	Cross Bar Assembly	3S41707	1
6	Bolting Bar, Front & Back	5S35450	4
7	Tank Assembly, Bottom	3S44586	1
8	Side Assembly	3S38254	2
9	Bolting Bar, Ends	5S44420	4

Specific BOMs listed: 3058-001-01/03, 3058-001-10/12



COOLING SYSTEM

1200 GLACIER RADIATOR

8.1.3

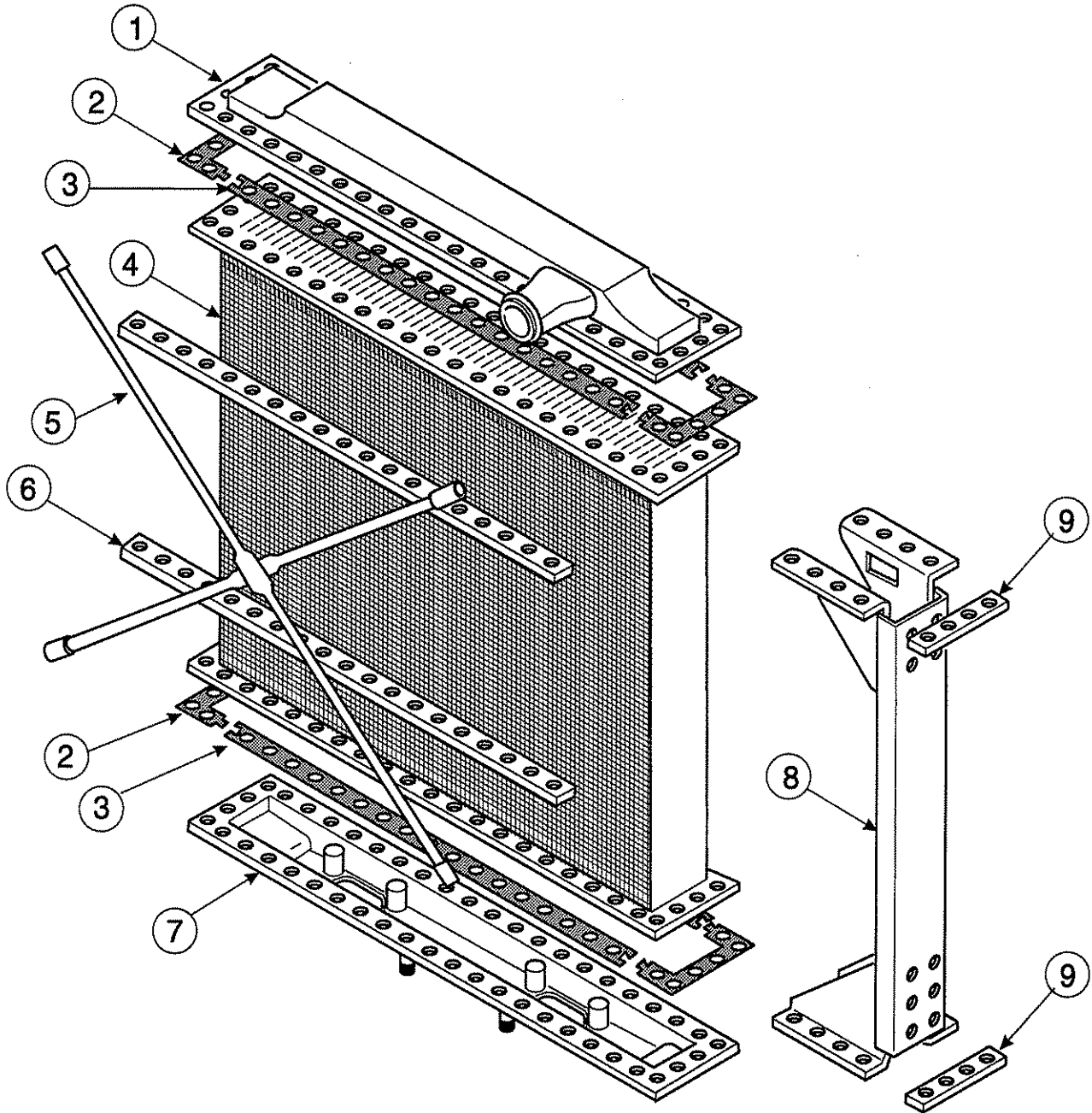
1200 GLACIER HIGH FLOW RADIATOR BREAKDOWN

Radiator Assembly, 1200 Glacier High Flow, 4 Row, Severe Service 20001G3480-SS

Item	Description	Part Number	Qty
1	Top Tank	3S38734	1
2	Gasket, Ends	5S35455	4
3	Gasket, Strip	5S35456	4
4	Core and Header	GC480018	1
5	Cross Bar Assembly	3S41707	1
6	Bolting Bar, Front & Back	5S35450	4
7	Tank Assembly, Bottom	3S44586	1
8	Side Assembly	3S38254	2
9	Bolting Bar, Ends	5S44420	4

Specific BOMs listed: 3058-001-08, 3058-001-13

COOLING SYSTEM 8

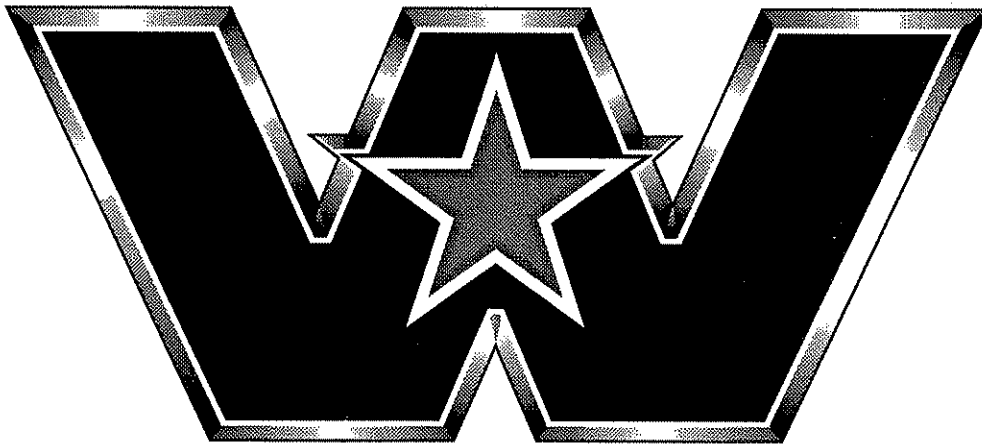


1300 HIGH FLOW RADIATOR BREAKDOWN

Radiator Assembly, 1300 High Flow, 4 Row, Severe Service 20001-3499-SS

Item	Description	Part Number	Qty
1	Top Tank	3S38734	1
2	Gasket, Ends	5S35455	4
3	Gasket, Strip	5S35456	4
4	Core and Header	3S44414	1
5	Cross Bar Assembly	3S41707	1
6	Bolting Bar, Front & Back	5S35450	4
7	Tank Assembly, Bottom	3S44586	1
8	Side Assembly, RH	3S44415	2
8	Side Assembly, LH	3S44416	2
9	Bolting Bar, Ends	5S44420	4

Specific BOMs listed: 3058-001-07



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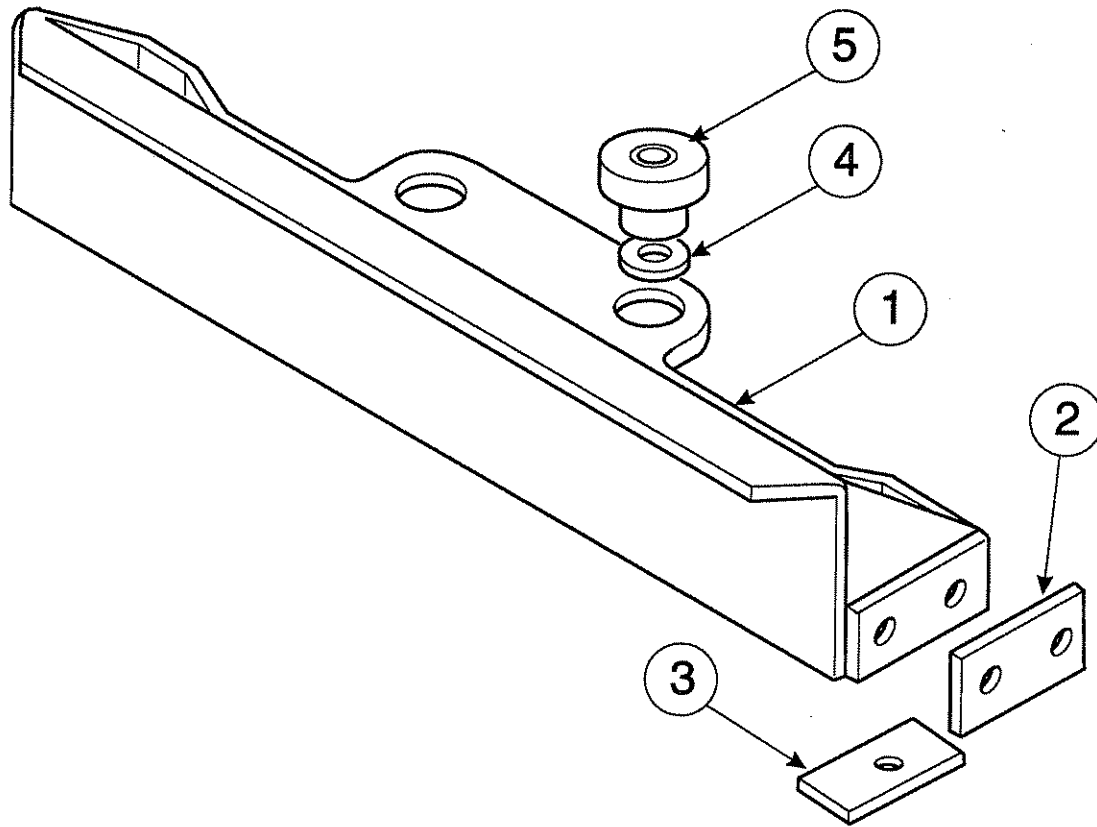
RADIATOR CROSSMEMBERS

8.1.5

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Note: This publication is a generic parts book. Components may vary with different applications. For applications other than listed at the bottom of the page, see the appropriate Bill of Material by truck serial number, and use this publication as a guide only.



COOLING SYSTEM

RADIATOR CROSSMEMBERS

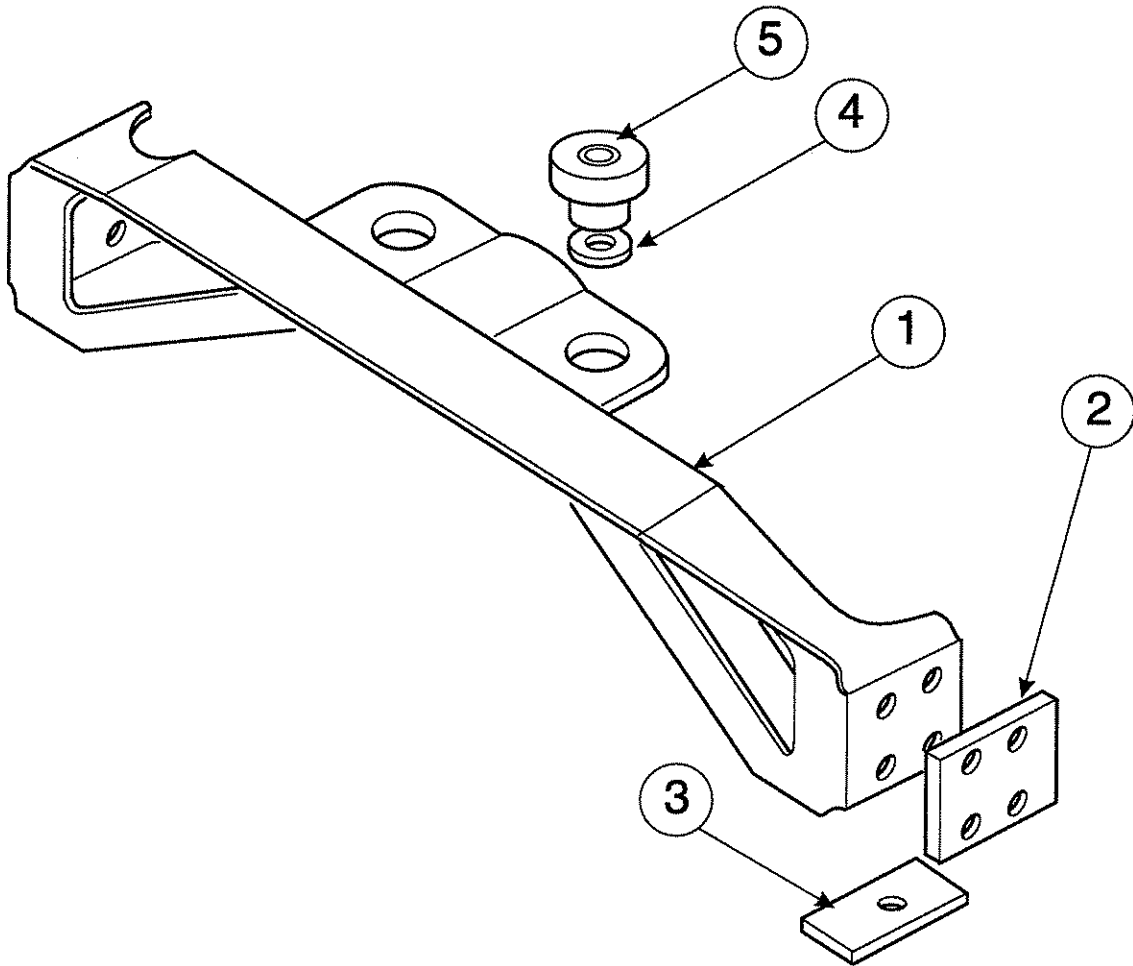
8.1.5

IRON CROSSMEMBER, 1200, 1300 RADIATORS

Item	Description	Part Number	Qty
1	Rad Crossmember, 1200, 32.5"	20013-3447	1
1	Rad Crossmember, 1200, 32.5", (with holes for mounting oil cooler)	20013-3528	1
2	Spacer, Side, .12	20019-3409	AR
2	Spacer, Side, .19	20019-3410	AR
2	Spacer, Side, .25	20019-3411	AR
3	Spacer, Bottom, .12	20019-3412	AR
3	Spacer, Bottom, .25	20019-3413	AR
3	Spacer, Bottom, .31	20019-3414	AR
3	Spacer, Bottom, .38	20019-3415	AR
4	Washer	9011501	2
5	Rubber Mount	90099902	

Specific BOMs listed: 3059-002-01/03, 3059-002-09, 3059-002-40/43

COOLING SYSTEM 8



COOLING SYSTEM

RADIATOR CROSSMEMBERS

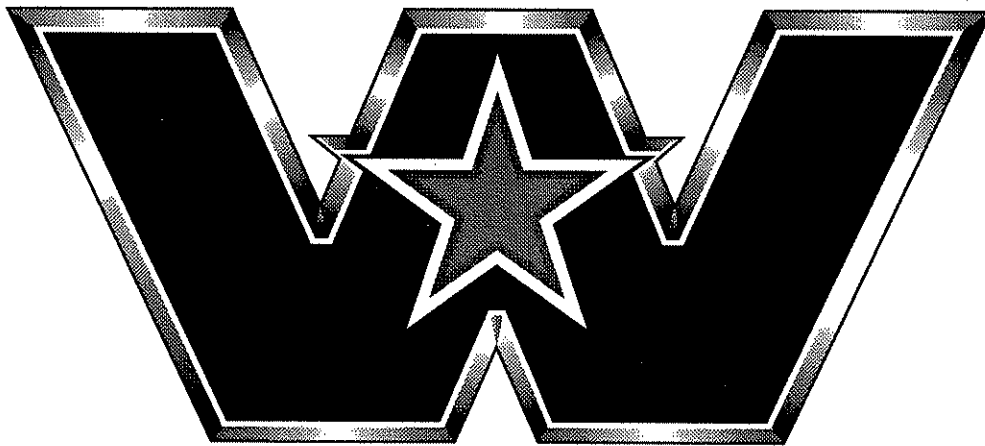
8.1.5

IRON & ALUMINUM CROSSMEMBERS, 1100 RADIATORS

Item	Description	Part Number	Qty
1	Rad Crossmember, Iron 1100, 32.5"	20013-3449	1
1	Rad Crossmember, Aluminum 1100, 32.5"	20013-3526	1
2	Spacer, Side, .12	20019-3416	AR
2	Spacer, Side, .19	20019-3417	AR
2	Spacer, Side, .25	20019-3426	AR
3	Spacer, Bottom, .12	20019-3412	AR
3	Spacer, Bottom, .25	20019-3413	AR
3	Spacer, Bottom, .31	20019-3414	AR
3	Spacer, Bottom, .38	20019-3415	AR

Specific BOMs listed: 3059-002-05/07, 3059-002-10/14, 3059-002-16/18, 3059-002-20/23,
3059-002-25, 3059-002-30/32, 3059-002-45

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1100 RADIATOR PIPING

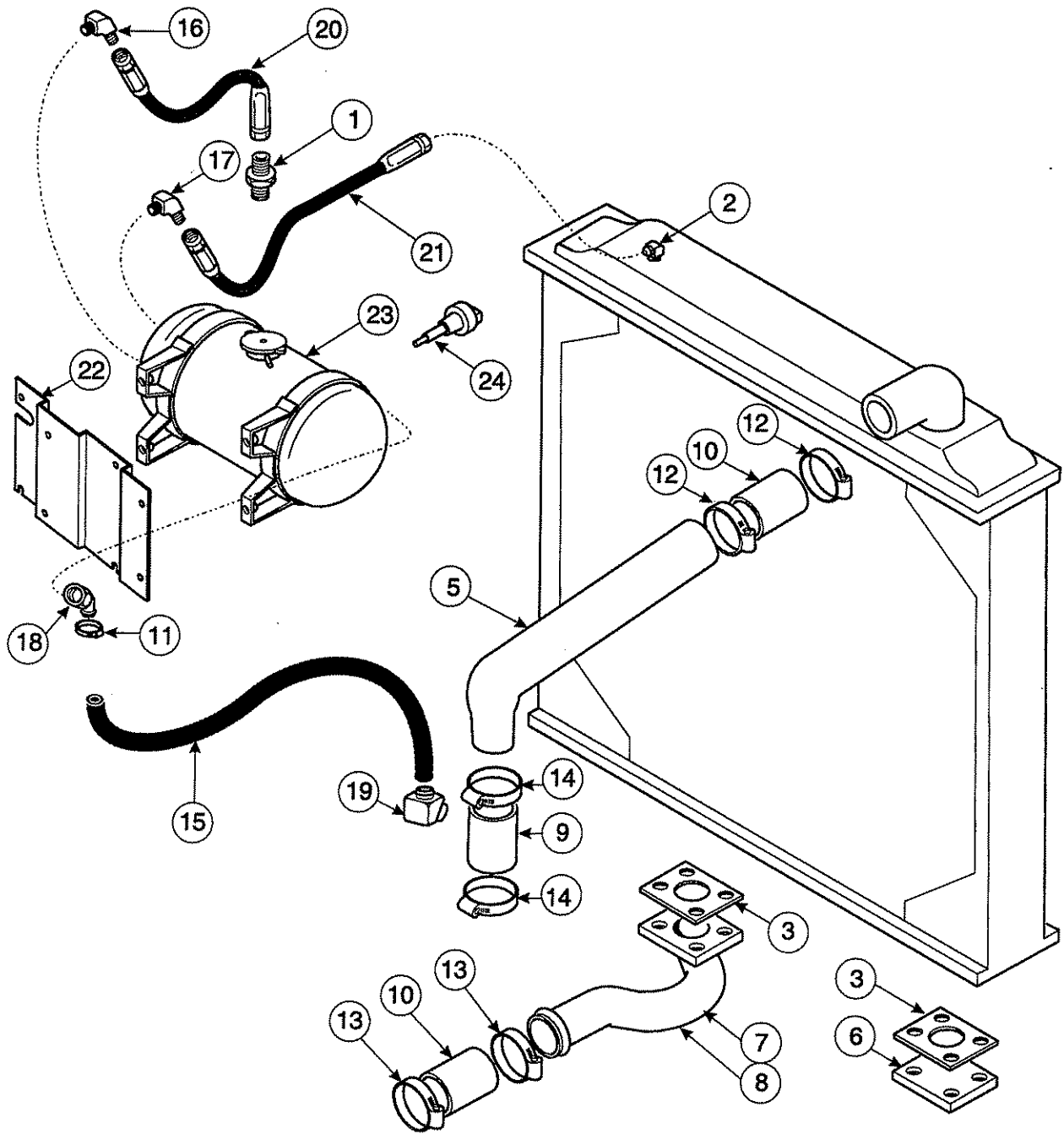
8.2

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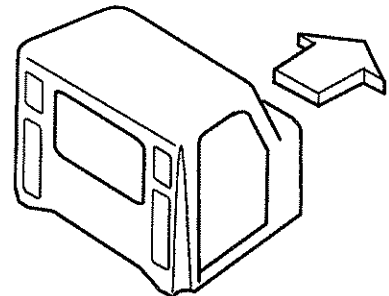
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RAD PIPING - 1100 RAD- CAT 3176B



COOLING SYSTEM

1100 RAD PIPING - CAT 3176B

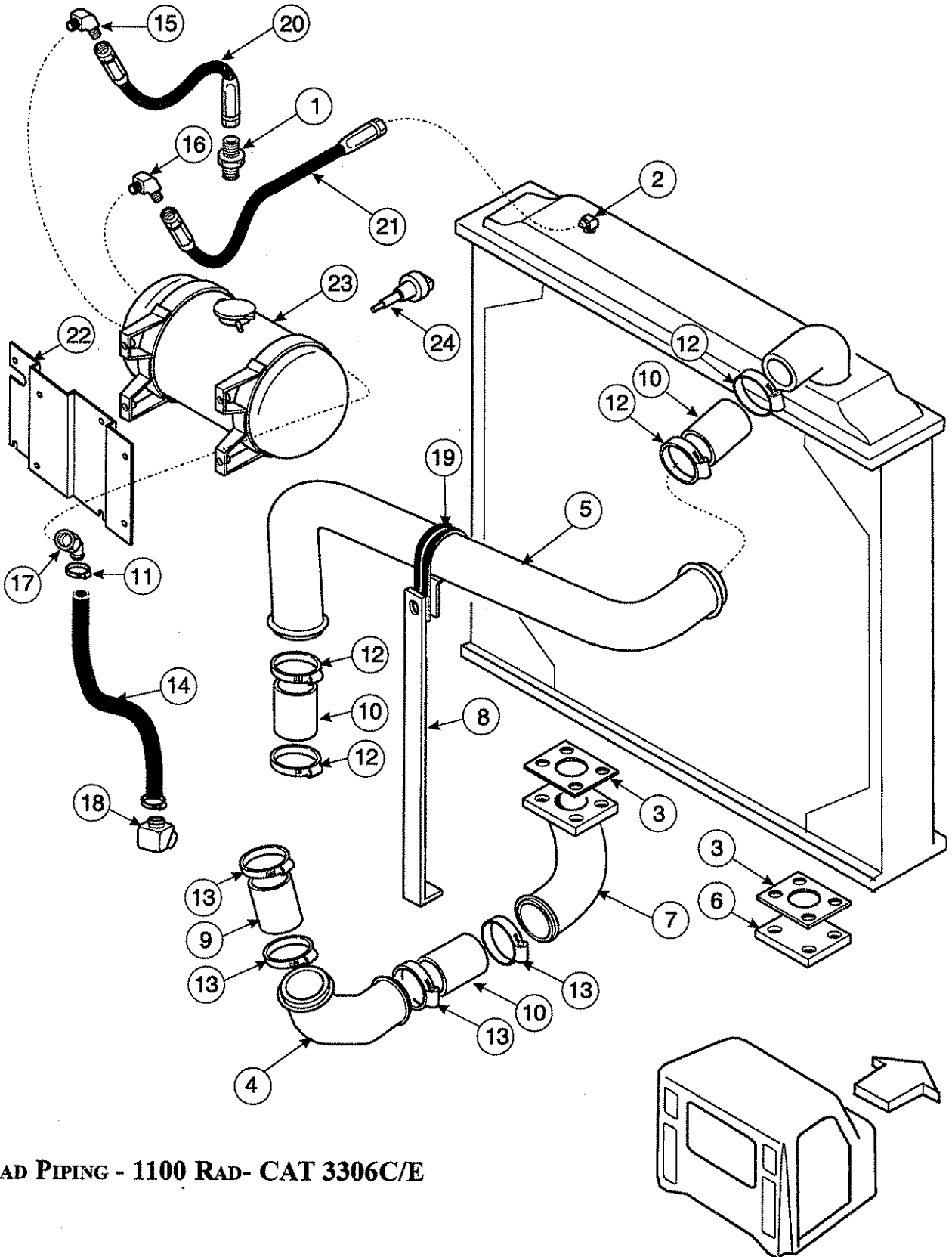
8.2.1

RAD PIPING - 1100 RAD- CAT 3176B

Item	Description	Part Number	Qty
1	Adapter, #6 x 1/4 NPT	118750	1
2	Elbow 90 Deg #6 x 1/4 NPT	118755	1
3	Gasket Rad Outlet	20028-3411	2
5	Pipe, Rad Inlet	20403-3518	1
6	Cover Plate, Radiator	20404-3447	1
7	Adapter, Rad Outlet (Without Kim Hotstart)	20404-3484	1
8	Adapter, Rad Outlet (With Kim Hotstart)	20404-3485	1
9	Hose, Silicone 2.0 ID x 5"	20422-3403-005	1
10	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
11	Clamp, Liner, .81 - 1.50	20427-3422	2
12	Clamp, Liner, 2.06 - 3.00	20427-3425	2
13	Clamp, Const. Torque, 2.25 - 3.0	20427-3428	2
14	Clamp, Liner, 1.56 - 2.50	20427-3424	2
15	Hose, Static Fill 1.0" x 44" (48/58 Models)	20428-3404-044	1
15	Hose, Static Fill 1.0" x 54" (49/59 Models)	20428-3404-054	1
16	Elbow 90 Deg #6 x 3/8 NPT	461481	1
17	Elbow 90 Deg #6 x 3/8 NPT	461481	1
18	Elbow 45 Deg #16AE x 1" Hose	5349-3446	1
19	Elbow 45 Deg 3/4 NPT x 1" Hose	5397-3404	1
20	Hose Assy #6 Wire Braid x 42" (48/58 Models)	5732-42.0	1
20	Hose Assy #6 Wire Braid x 52" (49/59 Models)	5732-52.0	1
21	Hose Assy #6 Wire Braid x 48" (48/58 Models)	5732-48.0	1
21	Hose Assy #6 Wire Braid x 52" (49/59 Models)	5732-52.0	1
22	Mounting Bracket, Surge Tank	20013-3539	1
23	Surge Tank Assembly	20003-3416	1
-	Surge Tank	20003-3417	1
-	Strap	20003-3418	2
-	Sight Glass	20301-3404	1
-	Rad Cap, 7 psi	20009-4404	1
24	Low Coolant Sensor, Mechanical	20301-3407	1
24	Low Coolant Sensor, Electronic	20301-3406	1

Specific BOMs listed: 3068-001-01/04

COOLING SYSTEM 8



RAD PIPING - 1100 RAD- CAT 3306C/E

COOLING SYSTEM

1100 RAD PIPING - CAT 3306C/E

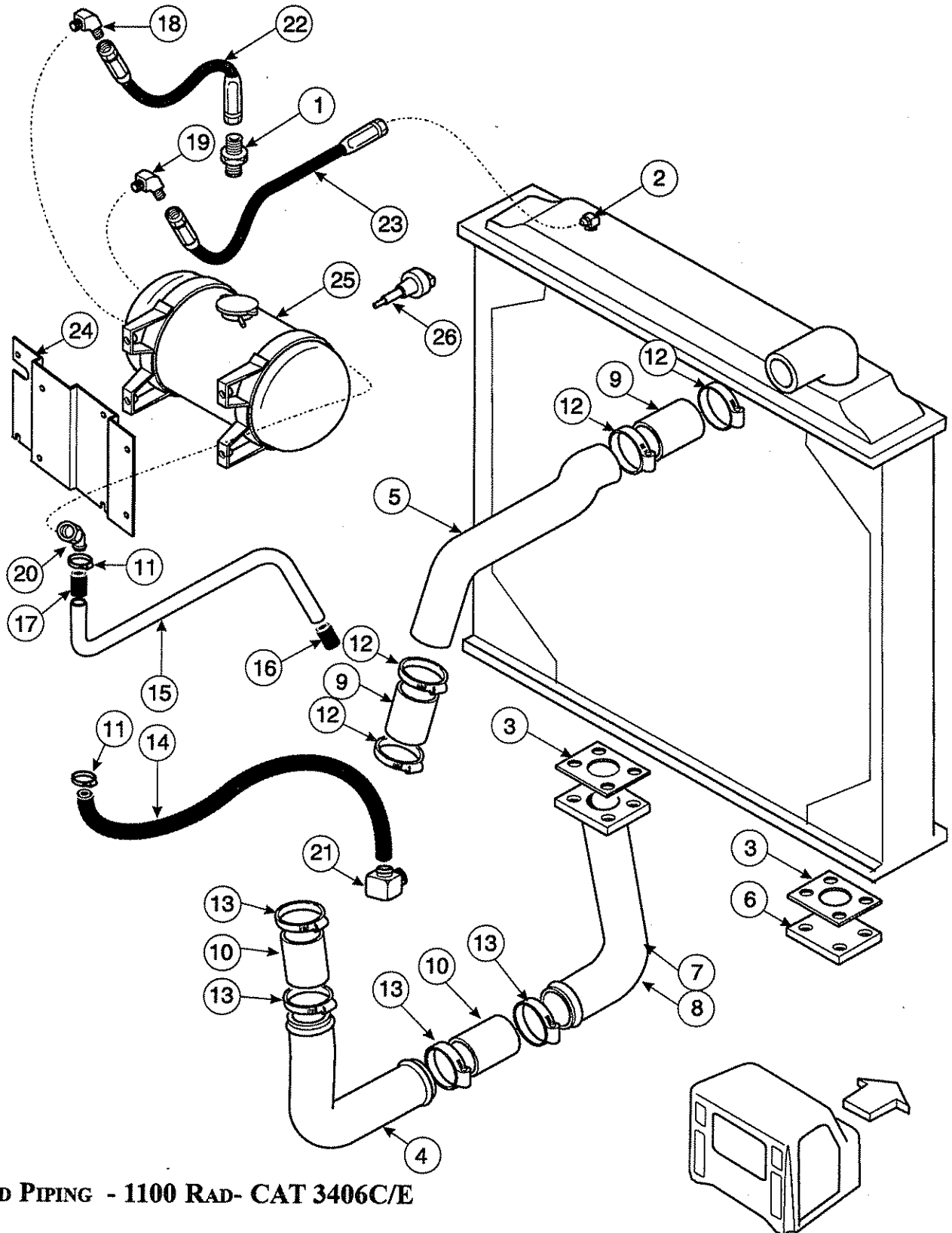
8.2.2

RAD PIPING - 1100 RAD- CAT 3306

Item	Description	Part Number	Qty
1	Adapter, #6 x 1/8 NPT	5019-3449	1
2	Elbow 90 Deg #6 x 1/4 NPT	118755	1
3	Gasket Rad Outlet	20028-3411	2
4	Pipe, Engine Inlet	20402-3408	1
5	Pipe, Rad Inlet	20403-3517	1
6	Cover Plate, Radiator	20404-3447	1
7	Adapter, Rad Outlet (Without Kim Hotstart)	20404-3483	1
8	Bracket, Rad Pipe Support	20415-3405	1
9	Hose, Silicone 2.0 ID x 5"	20422-3405-004	1
10	Hose, Silicone 2.5 ID x 5"	20422-3405-005	3
11	Clamp, Liner, .81 - 1.50	20427-3422	2
12	Clamp, Liner, 2.06 - 3.00	20427-3425	4
13	Clamp, Const. Torque, 2.75 - 3.0	20427-3429	4
14	Hose, Static Fill 1.0" x 52" (48/58 Models)	20428-3404-052	1
14	Hose, Static Fill 1.0" x 68" (49/59 Models)	20428-3404-068	1
15	Elbow 90 Deg #6 x 3/8 NPT	461481	1
16	Elbow 90 Deg #6 x 3/8 NPT	461481	1
17	Elbow 45 Deg #16AE x 1" Hose	5349-3446	1
18	Elbow 45 Deg 3/4 NPT x 1" Hose	5397-3404	1
19	Clip, .44 STD x 2.5 Dia.	7136305	1
20	Hose Assy #6 Wire Braid x 28", (48/58 Models)	5732-28.0	1
20	Hose Assy #6 Wire Braid x 44", (49/59 Models)	5732-44.0	1
21	Hose Assy #6 Wire Braid x 28", (48/58 Models)	5732-28.0	1
21	Hose Assy #6 Wire Braid x 44", (49/59 Models)	5732-44.0	1
22	Mounting Bracket, Surge Tank	20013-3539	1
23	Surge Tank Assembly	20003-3416	1
-	- Surge Tank	20003-3417	1
-	- Strap	20003-3418	2
-	- Sight Glass	20301-3404	1
-	- Rad Cap, 7 psi.	20009-4404	1
24	Low Coolant Sensor, Mechanical	20301-3407	1
24	Low Coolant Sensor, Electronic	20301-3406	1

Specific BOMs listed: 3068-002-01/02

COOLING SYSTEM 8



RAD PIPING - 1100 RAD- CAT 3406C/E

COOLING SYSTEM

1100 RAD PIPING - CAT 3406C/E

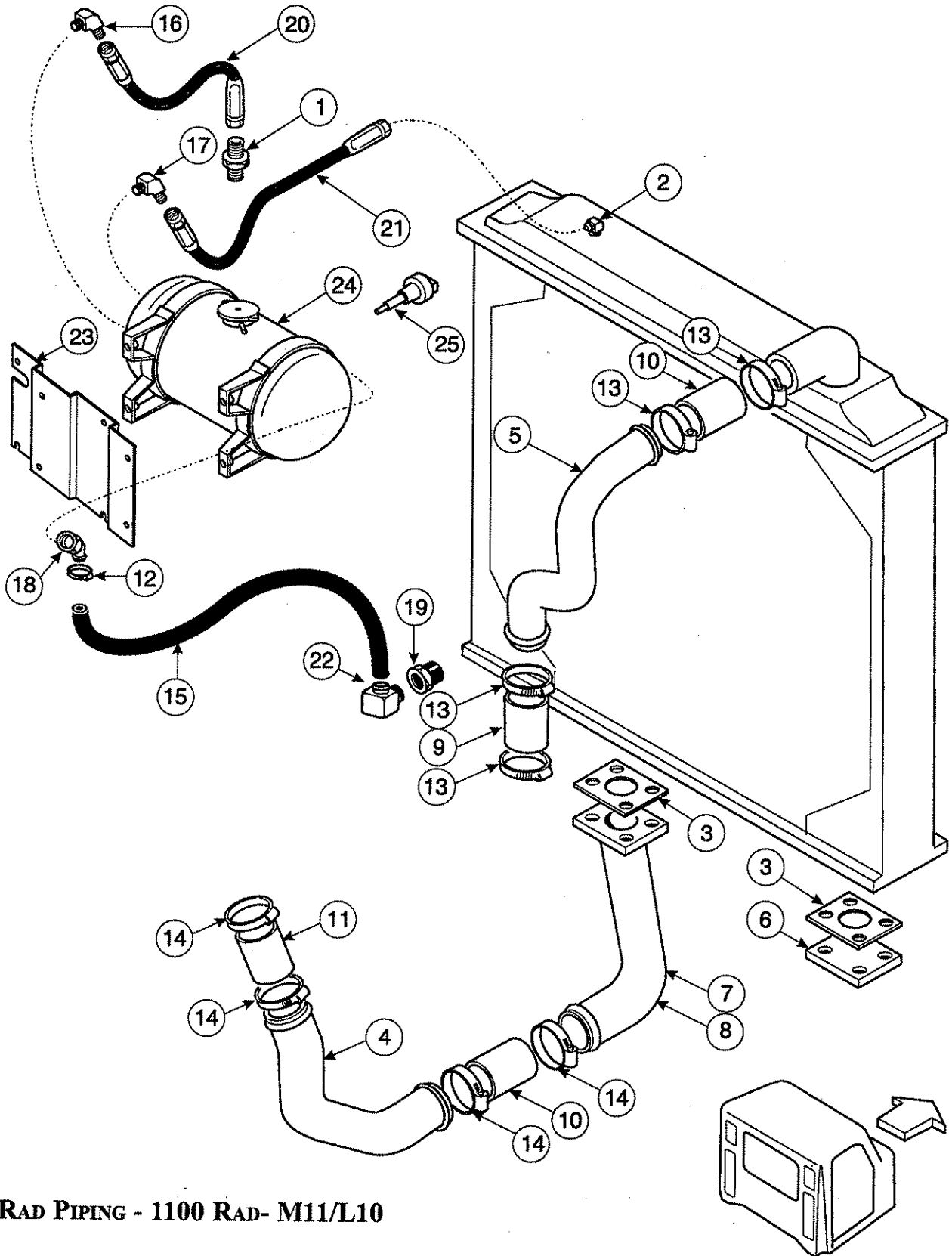
8.2.3

RAD PIPING - 1100 RAD- CAT 3406C/E

Item	Description	Part Number	Qty
1	Adapter, #6 x 1/4 NPT	118750	1
2	Elbow 90 Deg #6 x 1/4 NPT	118755	1
3	Gasket Rad Outlet	20028-3411	2
4	Pipe, Engine Inlet	20402-3406	1
5	Pipe, Rad Inlet	20403-3516	1
6	Cover Plate, Radiator	20404-3447	1
7	Adapter, Rad Outlet (Without Kim Hotstart)	20404-3481	1
8	Adapter, Rad Outlet (With Kim Hotstart)	20404-3482	1
9	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
10	Hose, Silicone 3.0 ID x 6"	20422-3406-006	2
11	Clamp, Liner, .81 - 1.50	20427-3422	2
12	Clamp, Liner, 2.06 - 3.00	20427-3425	4
13	Clamp, Const. Torque, 2.75 - 3.0	20427-3429	4
14	Hose, Static Fill 1.0" x 44", (48/58 Models)	20428-3404-044	1
15	Tube, Static Fill (49/59 Models)	20406-3514	1
16	Hose Silicone 1.0" ID x 5", (49/59 Models)	20422-3402-005	1
17	Hose Silicone 1.0" ID x 12", (49/59 Models)	20422-3402-012	1
18	Elbow 90 Deg #6 x 3/8 NPT	461481	1
19	Elbow 90 Deg #6 x 3/8 NPT	461481	1
20	Elbow 45 Deg #16AE x 1" Hose	5349-3446	1
21	Elbow 90 Deg 3/4 NPT x 1" Hose	5397-3405	1
22	Hose Assy #6 Wire Braid x 40", (48/58 Models)	5732-40.0	1
22	Hose Assy #6 Wire Braid x 44", (49/59 Models)	5732-44.0	1
22	Hose Assy #6 Wire Braid x 54", (49EX Models)	5732-54.0	1
23	Hose Assy #6 Wire Braid x 42", (48/58 Models)	5732-42.0	1
23	Hose Assy #6 Wire Braid x 60", (49/59 Models)	5732-60.0	1
23	Hose Assy #6 Wire Braid x 70", (49EX Models)	5732-70.0	1
24	Mounting Bracket, Surge Tank	20013-3539	1
25	Surge Tank Assembly	20003-3416	1
-	- Surge Tank	20003-3417	1
-	- Strap	20003-3418	2
-	- Sight Glass	20301-3404	1
-	- Rad Cap, 7 psi	20009-4404	1
26	Low Coolant Sensor, Mechanical	20301-3407	1
26	Low Coolant Sensor, Electronic	20301-3406	1

Specific BOMs listed: 3068-003-01/04, 3068-003-13/14

COOLING SYSTEM 8



RAD PIPING - 1100 RAD- M11/L10

COOLING SYSTEM

1100 RAD PIPING - CUMMINS M11/ L10

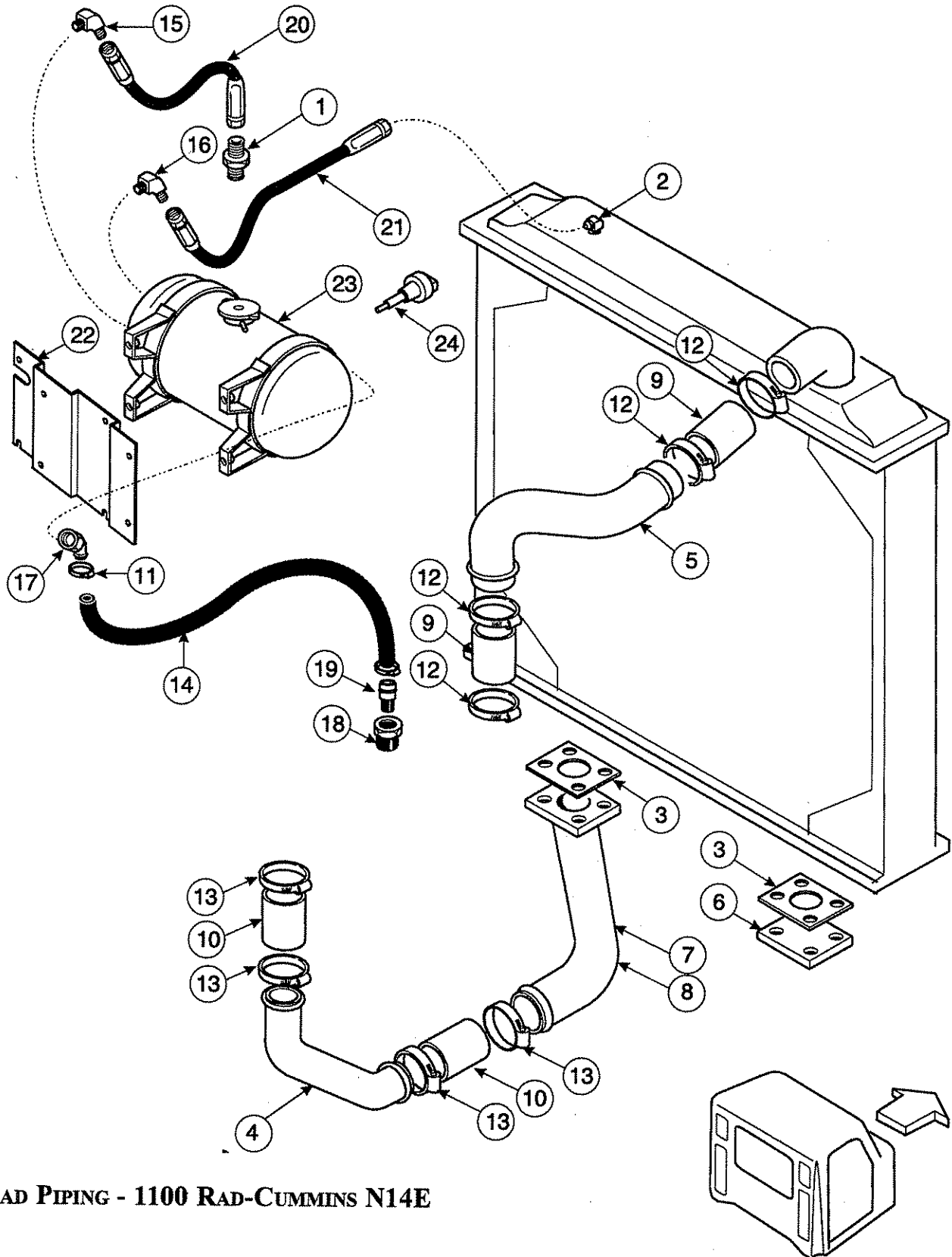
8.2.4

RAD PIPING - 1100 RAD- M11/L10

Item	Description	Part Number	Qty
1	Adapter, #6 x 1/4 NPT	118750	1
2	Elbow 90 Deg #6 x 1/4 NPT	118755	1
3	Gasket Rad Outlet	20028-3411	2
4	Pipe, Engine Inlet	20402-3415	1
5	Pipe, Rad Inlet	20403-3515	1
6	Cover Plate, Radiator	20404-3447	1
7	Adapter, Rad Outlet (Without Kim Hotstart)	20404-3479	1
8	Adapter, Rad Outlet (With Kim Hotstart)	20404-3480	1
9	Hose, Silicone 2.25 ID x 5"	20422-3404-005	2
10	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
11	Hose, Silicone, 26 Deg.	20423-3409	1
12	Clamp, Liner, .81 - 1.50	20427-3422	2
13	Clamp, Liner, 2.06 - 3.00	20427-3425	4
14	Clamp, Const. Torque, 2.75 - 3.0	20427-3429	4
15	Hose, Static Fill 1.0" x 44", (48/58 Models)	20428-3404-044	1
15	Hose, Static Fill 1.0" x 47", (49/59 Models)	20428-3404-047	1
16	Elbow 90 Deg #6 x 3/8 NPT	461481	1
17	Elbow 90 Deg #6 x 3/8 NPT	461481	1
18	Elbow 45 Deg #16AE x 1" Hose	5349-3446	1
19	Bushing, 1" NPT x 3/4 NPT	5050-3401	1
20	Hose Assy #6 Wire Braid x 40", (48/58 Models)	5732-40.0	1
20	Hose Assy #6 Wire Braid x 44", (49/59 Models)	5732-44.0	1
21	Hose Assy #6 Wire Braid x 42", (48/58 Models)	5732-42.0	1
21	Hose Assy #6 Wire Braid x 60", (49/59 Models)	5732-60.0	1
22	Elbow 45 Deg 3/4 NPT x 1" Hose (attach to PN 5050-3401)	5397-3404	1
23	Mounting Bracket, Surge Tank	20013-3539	1
24	Surge Tank Assembly	20003-3416	1
-	- Surge Tank	20003-3417	1
-	- Strap	20003-3418	2
-	- Sight Glass	20301-3404	1
-	- Rad Cap, 7 psi.	20009-4404	1
25	Low Coolant Sensor, Mechanical	20301-3407	1
25	Low Coolant Sensor, Electronic	20301-3406	1

Specific BOMs listed: 3068-004-01/04

COOLING SYSTEM 8



RAD PIPING - 1100 RAD-CUMMINS N14E

COOLING SYSTEM

1100 RAD PIPING - CUMMINS N14E

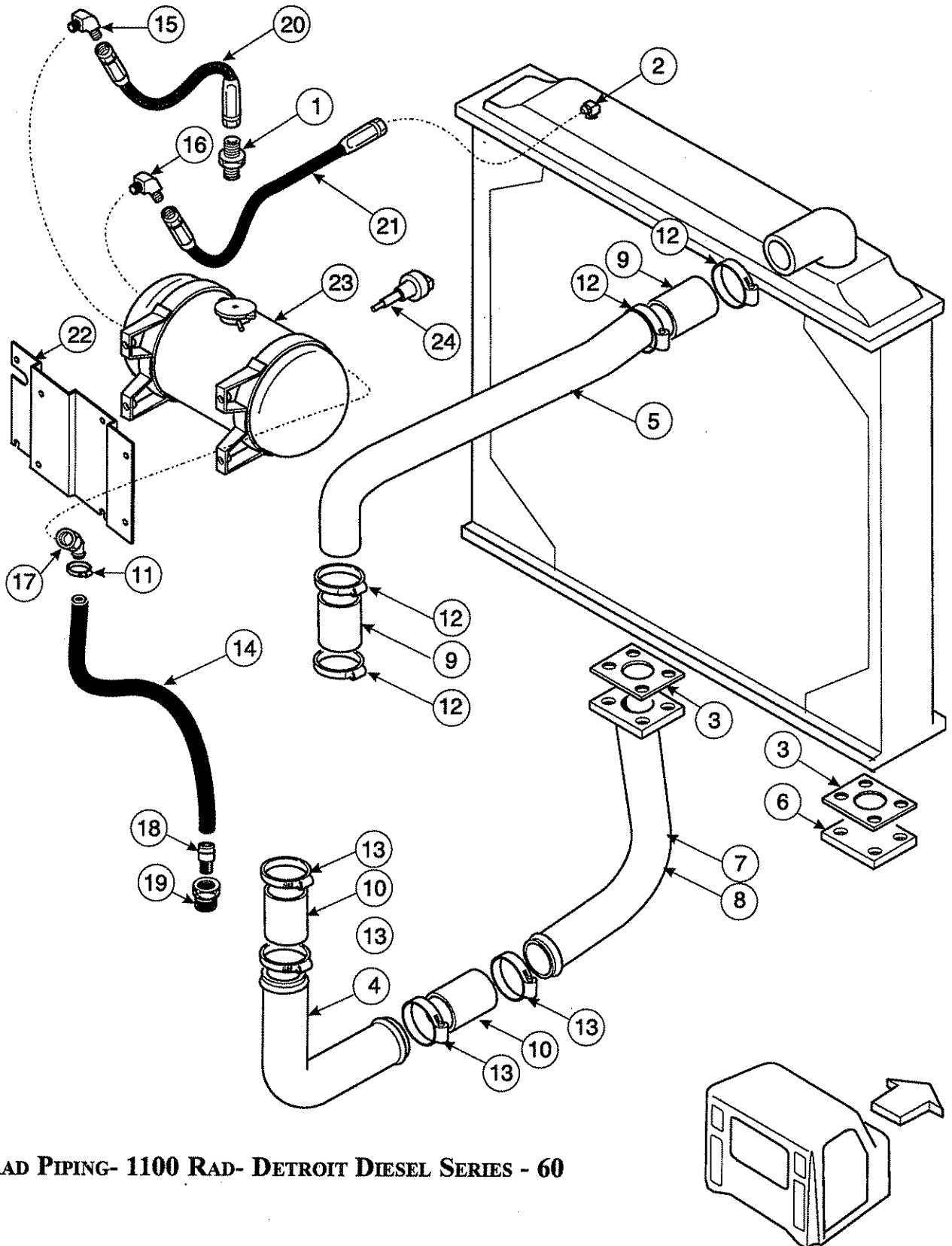
8.2.5

RAD PIPING - 1100 RAD- N14E

Item	Description	Part Number	Qty
1	Adapter, #6 x 1/4 NPT	118750	1
2	Elbow 90 Deg #6 x 1/4 NPT	118755	1
3	Gasket Rad Outlet	20028-3411	2
4	Pipe, Engine Inlet	20402-3416	1
5	Pipe, Rad Inlet	20403-3514	1
6	Cover Plate, Radiator	20404-3447	1
7	Adapter, Rad Outlet (Without Kim Hotstart)	20404-3479	1
8	Adapter, Rad Outlet (With Kim Hotstart)	20404-3480	1
9	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
10	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
11	Clamp, Liner, .81 - 1.50	20427-3422	2
12	Clamp, Liner, 2.06 - 3.00	20427-3425	4
13	Clamp, Const. Torque, 2.75 - 3.0	20427-3428	4
14	Hose, Static Fill 1.0" x 44", (48/58 Models)	20428-3404-044	1
14	Hose, Static Fill 1.0" x 47", (49/59 Models)	20428-3404-047	1
14	Hose, Static Fill 1.0" x 63", (49EX Model)	20428-3404-063	1
15	Elbow 90 Deg #6 x 3/8 NPT	461481	1
16	Elbow 90 Deg #6 x 3/8 NPT	461481	1
17	Elbow 45 Deg #16AE x 1" Hose	5349-3446	1
18	Bushing, 1" NPT x 3/4 NPT	5050-3401	1
19	Adapter, 3/4 NPT x 1" Hose (attach to PN 5050-3401)	5397-3409	1
20	Hose Assy #6 Wire Braid x 40", (48/58 Models)	5732-40.0	1
20	Hose Assy #6 Wire Braid x 44", (49/59 Models)	5732-44.0	1
20	Hose Assy #6 Wire Braid x 54", (49EX Model)	5732-54.0	1
21	Hose Assy #6 Wire Braid x 42", (48/58 Models)	5732-42.0	1
21	Hose Assy #6 Wire Braid x 60", (49/59 Models)	5732-60.0	1
21	Hose Assy #6 Wire Braid x 70", (49EX Model)	5732-70.0	1
22	Mounting Bracket, Surge Tank	20013-3539	1
23	Surge Tank Assembly	20003-3416	1
-	- Surge Tank	20003-3417	1
-	- Strap	20003-3418	2
-	- Sight Glass	20301-3404	1
-	- Rad Cap, 7 psi	20009-4404	1
24	Low Coolant Sensor, Mechanical	20301-3407	1
24	Low Coolant Sensor, Electronic	20301-3406	1

Specific BOMs listed: 3068-005-01/04, 3068-001-13/14

COOLING SYSTEM 8



RAD PIPING- 1100 RAD- DETROIT DIESEL SERIES - 60

COOLING SYSTEM

1100 RAD PIPING - DETROIT DIESEL SERIES - 60

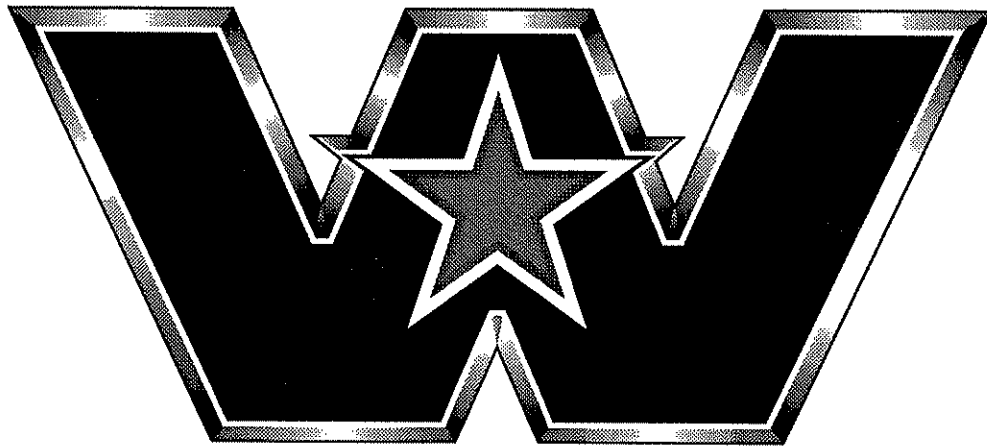
8.2.6

RAD PIPING- 1100 RAD- DETROIT DIESEL SERIES - 60

Item	Description	Part Number	Qty
1	Adapter, #6 x 1/4 NPT	118750	1
2	Elbow 90 Deg #6 x 1/4 NPT	118755	1
3	Gasket Rad Outlet	20028-3411	2
4	Pipe, Engine Inlet	20402-3437	1
5	Pipe, Rad Inlet	20403-3513	1
6	Cover Plate, Radiator	20404-3447	1
7	Adapter, Rad Outlet (Without Kim Hotstart)	20404-3479	1
8	Adapter, Rad Outlet (With Kim Hotstart)	20404-3480	1
9	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
10	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
11	Clamp, Liner, .81 - 1.50	20427-3422	2
12	Clamp, Liner, 2.06 - 3.00	20427-3425	4
13	Clamp, Const. Torque, 2.75 - 3.0	20427-3429	4
14	Hose, Static Fill 1.0" x 44", (48/58 Models)	20428-3404-044	1
14	Hose, Static Fill 1.0" x 47", (49/59 Models)	20428-3404-047	1
14	Hose, Static Fill 1.0" x 63", (49EX Model)	20428-3404-063	1
15	Elbow 90 Deg #6 x 3/8 NPT	461481	1
16	Elbow 90 Deg #6 x 3/8 NPT	461481	1
17	Elbow 45 Deg #16AE x 1" Hose	5349-3446	1
18	Adapter, 3/4 NPT x 1" Hose (attach to PN 5050-3401)	5397-3409	1
19	Bushing, 1" NPT x 3/4 NPT	5050-3401	1
20	Hose Assy #6 Wire Braid x 40", (48/58 Models)	5732-40.0	1
20	Hose Assy #6 Wire Braid x 44", (49/59 Models)	5732-44.0	1
20	Hose Assy #6 Wire Braid x 54", (49EX Model)	5732-54.0	1
21	Hose Assy #6 Wire Braid x 42", (48/58 Models)	5732-42.0	1
21	Hose Assy #6 Wire Braid x 60", (49/59 Models)	5732-60.0	1
21	Hose Assy #6 Wire Braid x 70", (49EX Model)	5732-70.0	1
22	Mounting Bracket, Surge Tank	20013-3539	1
23	Surge Tank Assembly	20003-3416	1
	-Surge Tank	20003-3417	1
	-Strap	20003-3418	2
	-Sight Glass	20301-3404	1
	-Rad Cap, 7 psi.	20009-4404	1
24	Low Coolant Sensor, Series 60	20301-3409	1

Specific BOMs listed: 3068-006-01/04, 3068-006-13/14

COOLING SYSTEM 8

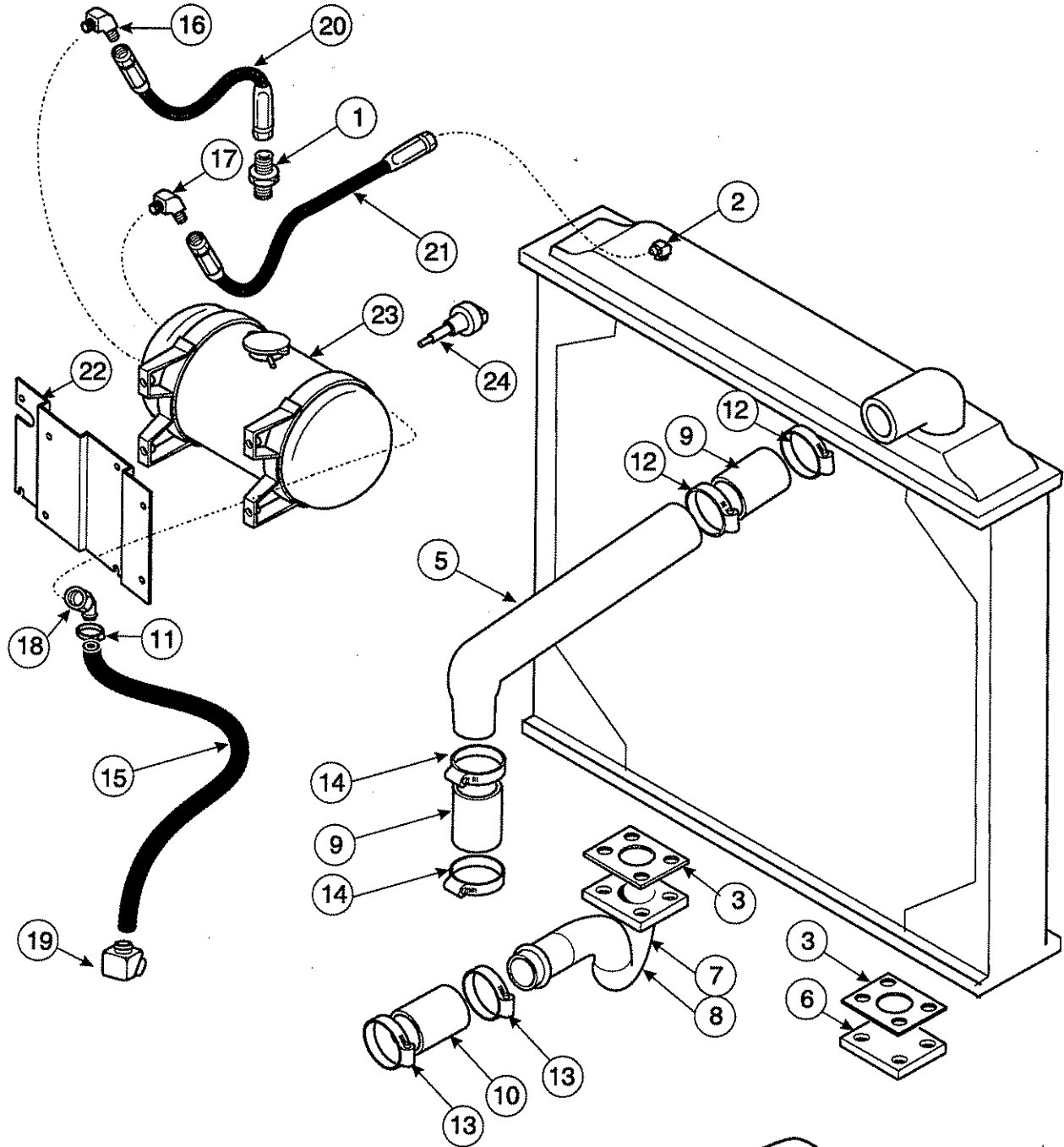


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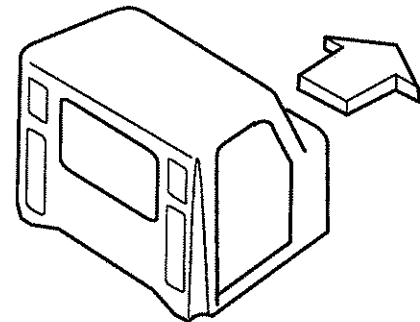
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Note: This publication is a generic parts book. Components may vary with different applications. For applications other than listed at the bottom of the page, see the appropriate Bill of Material by truck serial number, and use this publication as a guide only.



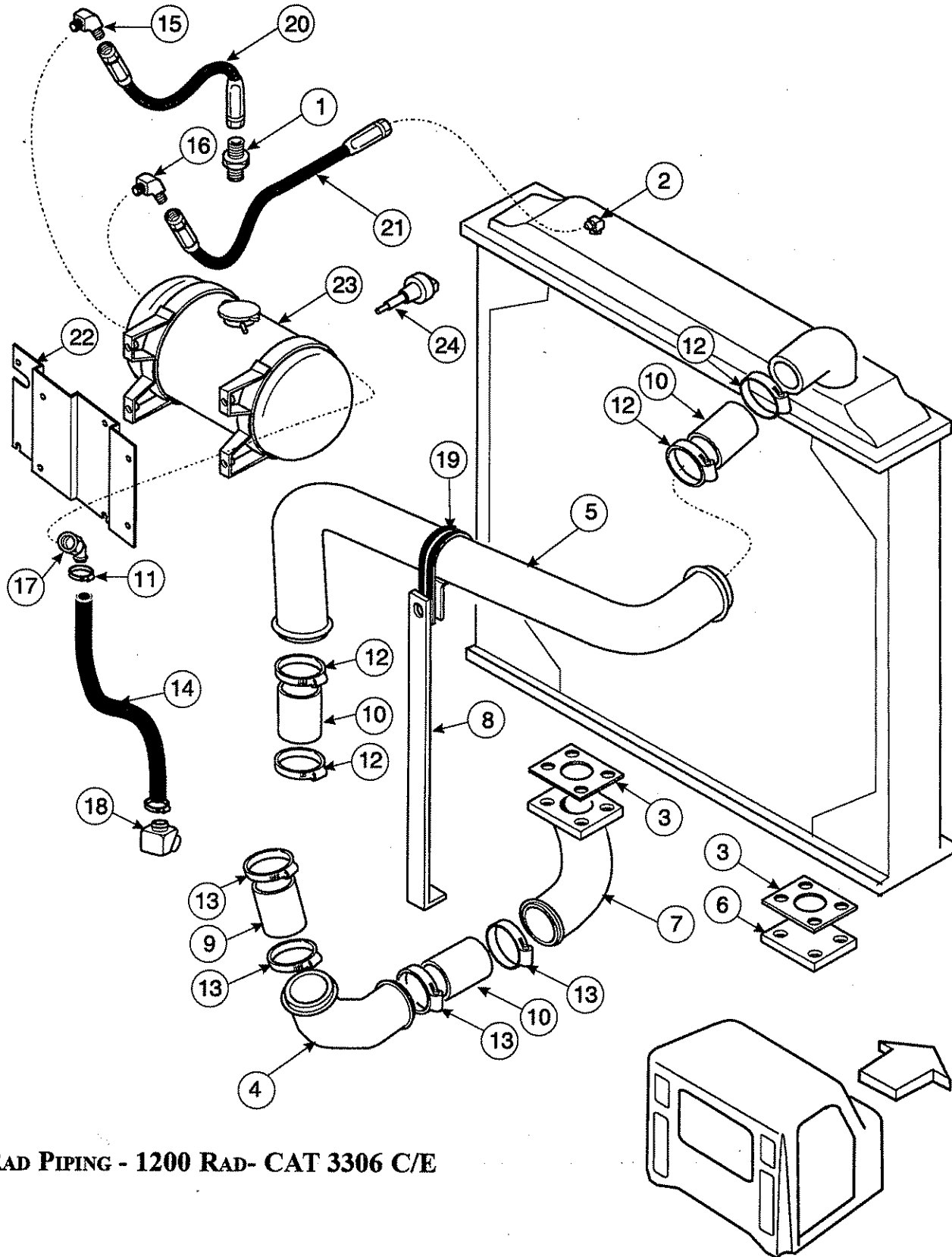
1200 RAD PIPING - CAT 3176B



1200 RAD PIPING - CAT 3176B

Item	Description	Part Number	Qty
1	Adapter, #6 x 1/4 NPT	118750	1
2	Elbow 90 Deg #6 x 1/4 NPT	118755	1
3	Gasket Rad Outlet	20028-3411	2
5	Pipe, Rad Inlet	20403-3518	1
6	Cover Plate, Radiator	20404-3447	1
7	Pipe, Rad Outlet (Without Kim Hotstart)	20406-3556	1
8	Pipe, Rad Outlet (With Kim Hotstart)	20406-3557	1
9	Hose, Silicone 2.0 ID x 5"	20422-3403-005	1
10	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
11	Clamp, Liner, .81 - 1.50	20427-3422	2
12	Clamp, Liner, 2.06 - 3.00	20427-3425	2
13	Clamp, Const. Torque, 2.25 - 3.0	20427-3428	2
14	Clamp, Liner, 1.56 - 2.50	20427-3424	2
15	Hose, Static Fill 1.0" x 44", (48/58 Models)	20428-3404-044	1
15	Hose, Static Fill 1.0" x 54", (49/59 Models)	20428-3404-054	1
16	Elbow 90 Deg #6 x 3/8 NPT	461481	1
17	Elbow 90 Deg #6 x 3/8 NPT	461481	1
18	Elbow 45 Deg #16AE x 1" Hose	5349-3446	1
19	Elbow 45 Deg 3/4 NPT x 1" Hose	5397-3404	1
20	Hose Assy #6 Wire Braid x 40", (48/58 Models)	5732-40.0	1
20	Hose Assy #6 Wire Braid x 52", (49/59 Models)	5732-52.0	1
21	Hose Assy #6 Wire Braid x 40", (48/58 Models)	5732-40.0	1
21	Hose Assy #6 Wire Braid x 52", (49/59 Models)	5732-52.0	1
22	Mounting Bracket, Surge Tank	20013-3539	1
23	Surge Tank Assembly	20003-3416	1
-	- Surge Tank	20003-3417	1
-	- Strap	20003-3418	2
-	- Sight Glass	20301-3404	1
-	- Rad Cap, 7 psi.	20009-4404	1
24	Low Coolant Sensor, Mechanical	20301-3407	1
24	Low Coolant Sensor, Electronic	20301-3406	1

Specific BOMs listed: 3068-001-05/08



RAD PIPING - 1200 RAD- CAT 3306 C/E

COOLING SYSTEM

1200 RAD PIPING - CAT 3306 C/E

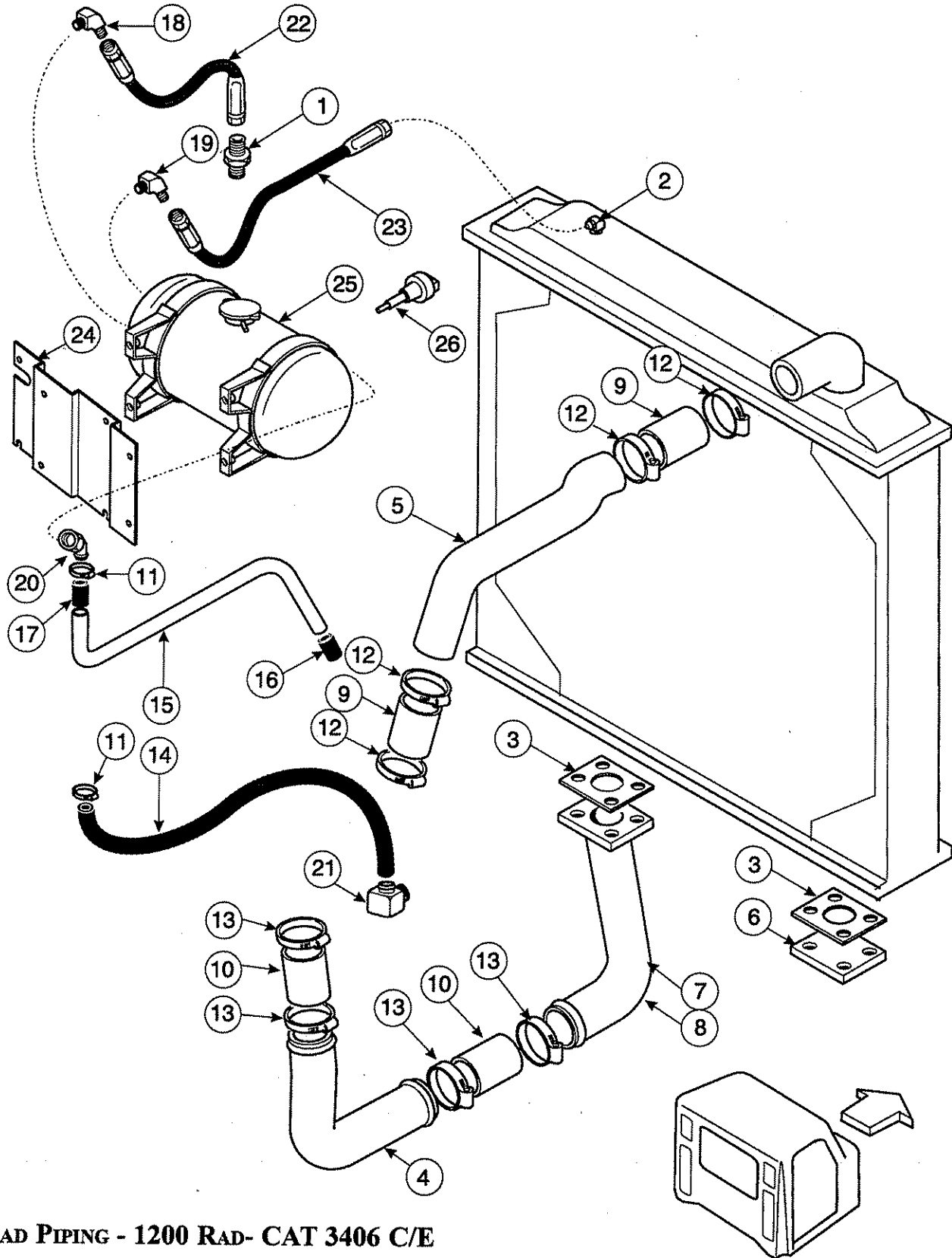
8.3.2

RAD PIPING - 1200 RAD - CAT 3306 C/E

Item	Description	Part Number	Qty
1	Adapter, #6 x 1/8 NPT	5019-3449	1
2	Elbow 90 Deg #6 x 1/4 NPT	118755	1
3	Gasket Rad Outlet	20028-3411	2
4	Pipe, Engine Inlet	20402-3408	1
5	Pipe, Rad Inlet	20403-3517	1
6	Cover Plate, Radiator	20404-3447	1
7	Adapter, Rad Outlet (Without Kim Hotstart)	20404-3455	1
8	Bracket, Rad Pipe Support	20415-3405	1
9	Hose, Silicone 2.0 ID x 5"	20422-3405-004	1
10	Hose, Silicone 2.5 ID x 5"	20422-3405-005	3
11	Clamp, Liner, .81 - 1.50	20427-3422	2
12	Clamp, Liner, 2.06 - 3.00	20427-3425	4
13	Clamp, Const. Torque, 2.75 - 3.0	20427-3429	4
14	Hose, Static Fill 1.0" x 52", (48/58 Models)	20428-3404-052	1
14	Hose, Static Fill 1.0" x 68", (49/59 Models)	20428-3404-068	1
15	Elbow 90 Deg #6 x 3/8 NPT	461481	1
16	Elbow 90 Deg #6 x 3/8 NPT	461481	1
17	Elbow 45 Deg #16AE x 1" Hose	5349-3446	1
18	Elbow 45 Deg 3/4 NPT x 1" Hose	5397-3404	1
19	Clip, .44 STD x 2.5 Dia.	7136305	1
20	Hose Assy #6 Wire Braid x 28", (48/58 Models)	5732-28.0	1
20	Hose Assy #6 Wire Braid x 44", (49/59 Models)	5732-44.0	1
21	Hose Assy #6 Wire Braid x 28", (48/58 Models)	5732-28.0	1
21	Hose Assy #6 Wire Braid x 44", (49/59 Models)s	5732-44.0	1
22	Mounting Bracket, Surge Tank	20013-3539	1
23	Surge Tank Assembly	20003-3416	1
-	- Surge Tank	20003-3417	1
-	- Strap	20003-3418	2
-	- Sight Glass	20301-3404	1
-	- Rad Cap, 7 psi.	20009-4404	1
24	Low Coolant Sensor, Mechanical	20301-3407	1
24	Low Coolant Sensor, Electronic	20301-3406	1

Specific BOMs listed: 3068-002-03/04

COOLING SYSTEM 8



RAD PIPING - 1200 RAD- CAT 3406 C/E

COOLING SYSTEM

1200 RAD PIPING - CAT 3406 C/E

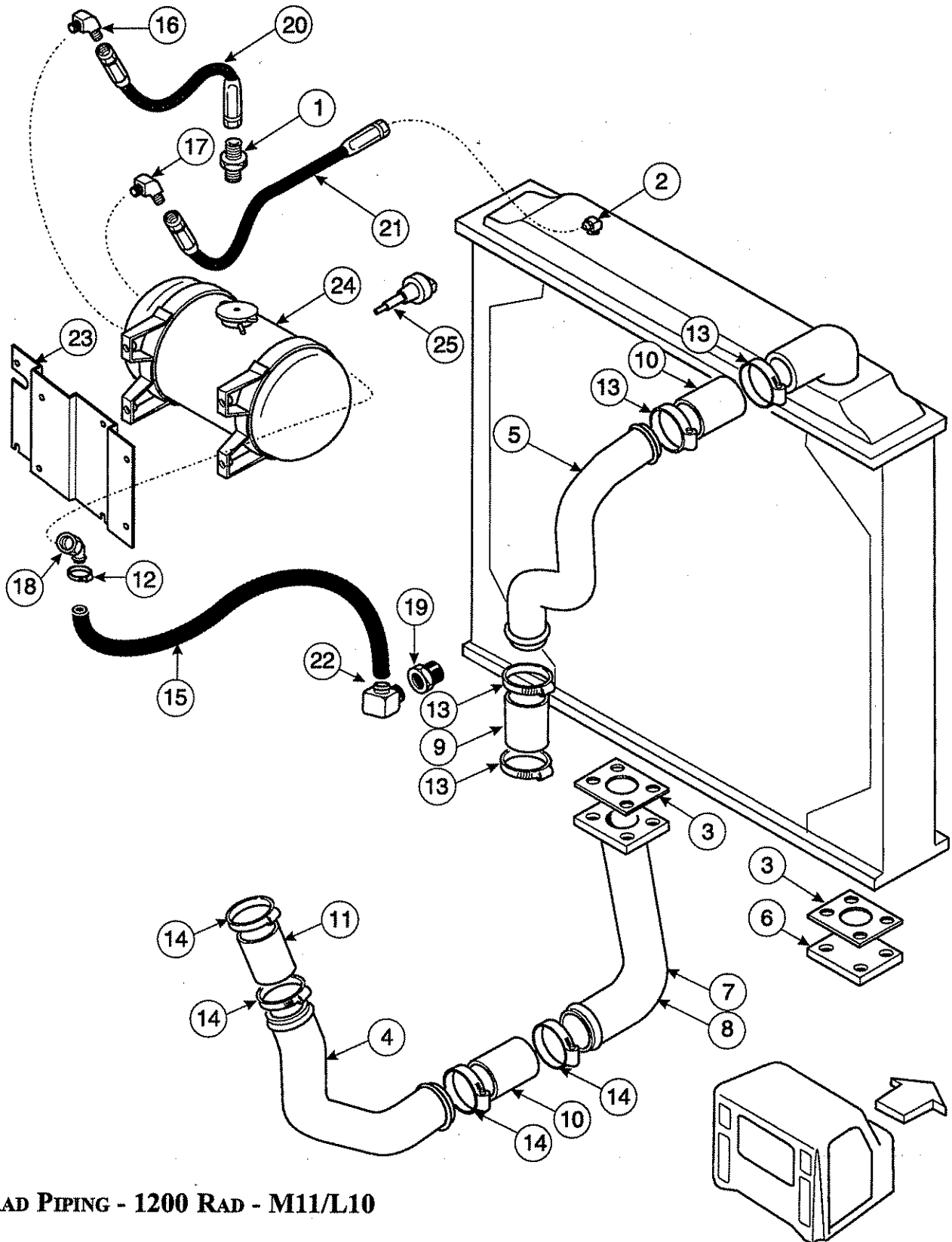
8.3.3

RAD PIPING - 1200 RAD- CAT 3406 C/E

Item	Description	Part Number	Qty
1	Adapter, #6 x 1/4 NPT	118750	1
2	Elbow 90 Deg #6 x 1/4 NPT	118755	1
3	Gasket Rad Outlet	20028-3411	2
4	Pipe, Engine Inlet	20402-3406	1
5	Pipe, Rad Inlet	20403-3516	1
6	Cover Plate, Radiator	20404-3447	1
7	Pipe, Rad Outlet (Without Kim Hotstart)	20406-3501	1
8	Pipe, Rad Outlet (With Kim Hotstart)	20406-3502	1
9	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
10	Hose, Silicone 3.0 ID x 6"	20422-3406-006	2
11	Clamp, Liner, .81 - 1.50	20427-3422	2
12	Clamp, Liner, 2.06 - 3.00	20427-3425	4
13	Clamp, Const. Torque, 2.75 - 3.0	20427-3429	4
14	Hose, Static Fill 1.0" x 44"	20428-3404-044	1
15	Tube, Static Fill, (49/59 Models)	20406-3514	1
16	Hose Silicone 1.0" ID x 5", (49/59 Models)	20422-3402-005	1
17	Hose Silicone 1.0" ID x 12", (49/59 Models)	20422-3402-012	1
18	Elbow 90 Deg #6 x 3/8 NPT	461481	1
19	Elbow 90 Deg #6 x 3/8 NPT	461481	1
20	Elbow 45 Deg #16AE x 1" Hose	5349-3446	1
21	Elbow 90 Deg 3/4 NPT x 1" Hose	5397-3405	1
22	Hose Assy #6 Wire Braid x 40", (48/58 Model)	5732-40.0	1
22	Hose Assy #6 Wire Braid x 44", (49/59 Model)	5732-44.0	1
22	Hose Assy #6 Wire Braid x 54", (49EX Models)	5732-54.0	1
23	Hose Assy #6 Wire Braid x 42", (48/58 Model)	5732-42.0	1
23	Hose Assy #6 Wire Braid x 60", (49/59 Model)	5732-60.0	1
23	Hose Assy #6 Wire Braid x 70", (49EX Models)	5732-70.0	1
24	Mounting Bracket, Surge Tank	20013-3539	1
25	Surge Tank Assembly	20003-3416	1
-	- Surge Tank	20003-3417	1
-	- Strap	20003-3418	2
-	- Sight Glass	20301-3404	1
-	- Rad Cap, 7 psi.	20009-4404	1
26	Low Coolant Sensor, Mechanical	20301-3407	1
26	Low Coolant Sensor, Electronic	20301-3406	1

Specific BOMs listed: 3068-003-05/08, 3068-003-15/16

COOLING SYSTEM 8



RAD PIPING - 1200 RAD - M11/L10

COOLING SYSTEM

1200 RAD PIPING - CUMMINS M11/L10

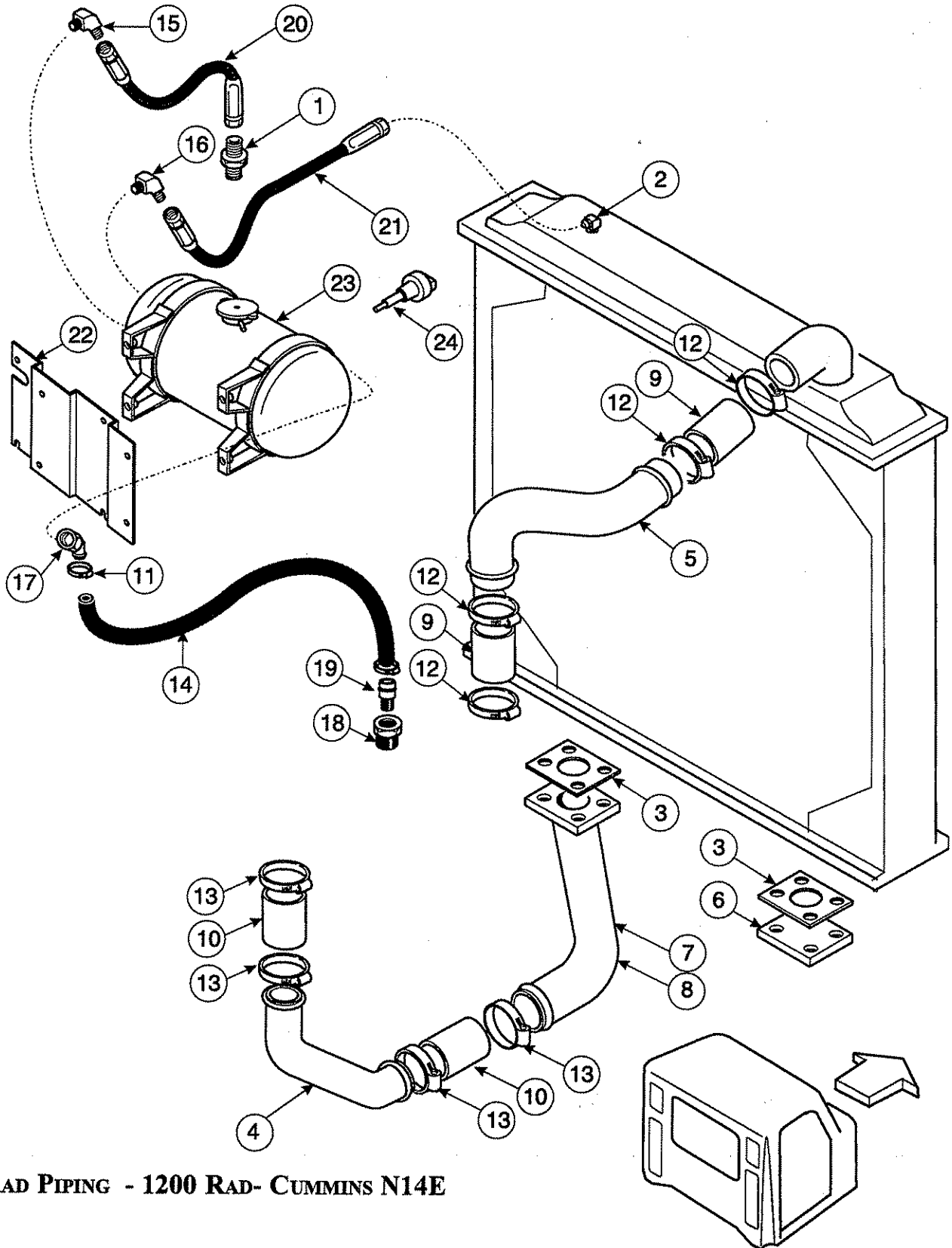
8.3.4

RAD PIPING - 1200 RAD - M11/L10

Item	Description	Part Number	Qty
1	Adapter, #6 x 1/4 NPT	118750	1
2	Elbow 90 Deg #6 x 1/4 NPT	118755	1
3	Gasket Rad Outlet	20028-3411	2
4	Pipe, Engine Inlet	20402-3415	1
5	Pipe, Rad Inlet	20403-3515	1
6	Cover Plate, Radiator	20404-3447	1
7	Adapter, Rad Outlet (Without Kim Hotstart)	20404-3517	1
8	Adapter, Rad Outlet (With Kim Hotstart)	20404-3520	1
9	Hose, Silicone 2.25 ID x 5"	20422-3404-005	2
10	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
11	Hose, Silicone, 26 Deg.	20423-3409	1
12	Clamp, Liner, .81 - 1.50	20427-3422	2
13	Clamp, Liner, 2.06 - 3.00	20427-3425	4
14	Clamp, Const. Torque, 2.75 - 3.0	20427-3429	4
15	Hose, Static Fill 1.0" x 44", (48/58 Models)	20428-3404-044	1
15	Hose, Static Fill 1.0" x 47", (49/59 Models)	20428-3404-047	1
16	Elbow 90 Deg #6 x 3/8 NPT	461481	1
17	Elbow 90 Deg #6 x 3/8 NPT	461481	1
18	Elbow 45 Deg #16AE x 1" Hose	5349-3446	1
19	Bushing, 1" NPT x 3/4 NPT	5050-3401	1
20	Hose Assy #6 Wire Braid x 40", (48/58 Models)	5732-40.0	1
20	Hose Assy #6 Wire Braid x 44", (49/59 Models)	5732-44.0	1
21	Hose Assy #6 Wire Braid x 42", (48/58 Models)	5732-42.0	1
21	Hose Assy #6 Wire Braid x 60", (49/59 Models)	5732-60.0	1
22	Elbow 90 Deg 3/4 NPT x 1" Hose (attach to PN 5050-3401)	5397-3405	1
23	Mounting Bracket, Surge Tank	20013-3539	1
24	Surge Tank Assembly	20003-3416	1
-	- Surge Tank	20003-3417	1
-	- Strap	20003-3418	2
-	- Sight Glass	20301-3404	1
-	- Rad Cap, 7 psi.	20009-4404	1
25	Low Coolant Sensor, Mechanical	20301-3407	1
25	Low Coolant Sensor, Electronic	20301-3406	1

Specific BOMs listed: 3068-004-05/08

COOLING SYSTEM 8



RAD PIPING - 1200 RAD- CUMMINS N14E

COOLING SYSTEM

1200 RAD PIPING - CUMMINS N14

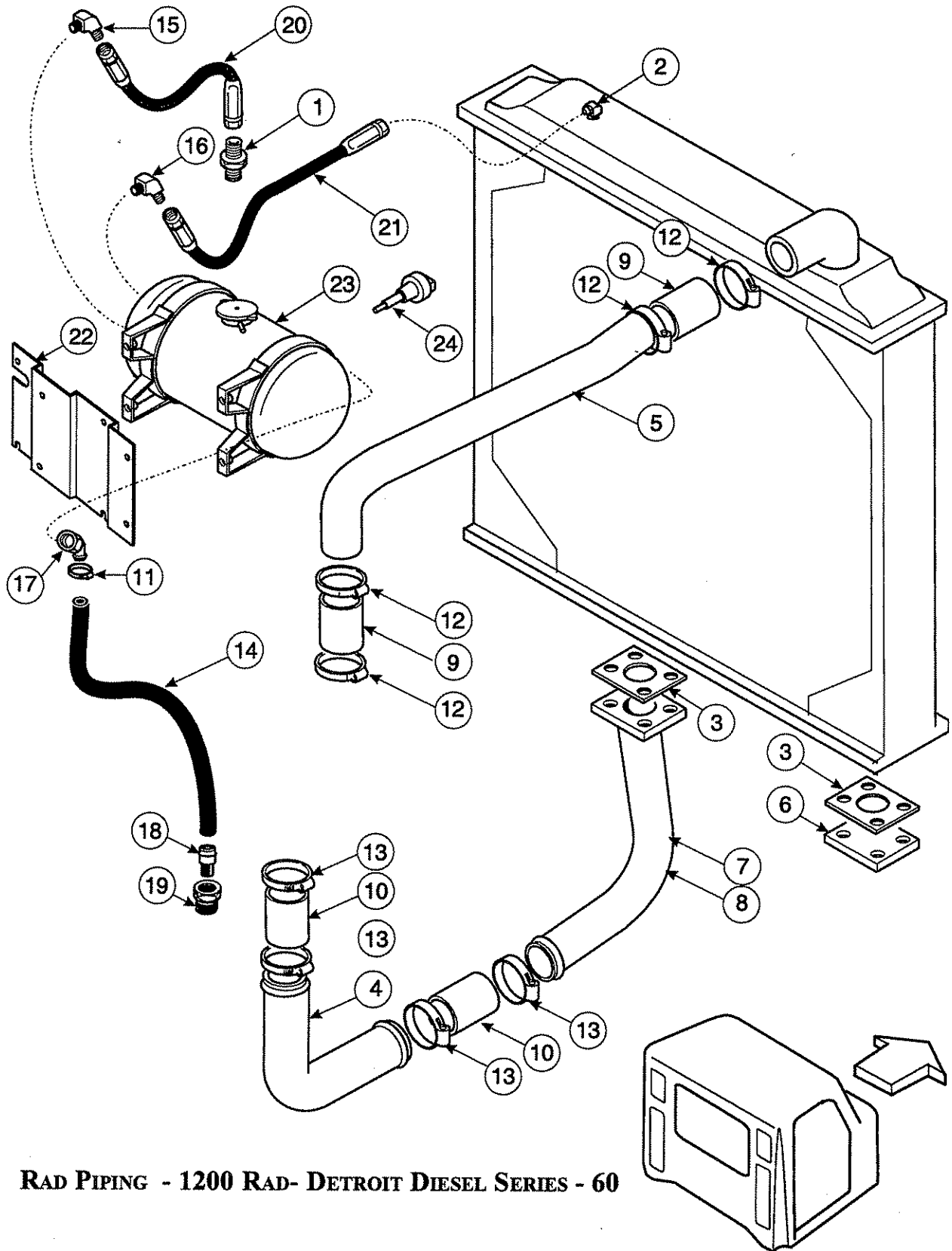
8.3.5

RAD PIPING - 1200 RAD- CUMMINS N14E

Item	Description	Part Number	Qty
1	Adapter, #6 x 1/4 NPT	118750	1
2	Elbow 90 Deg #6 x 1/4 NPT	118755	1
3	Gasket Rad Outlet	20028-3411	2
4	Pipe, Engine Inlet	20402-3416	1
5	Pipe, Rad Inlet	20403-3514	1
6	Cover Plate, Radiator	20404-3447	1
7	Adapter, Rad Outlet (Without Kim Hotstart)	20406-3517	1
8	Adapter, Rad Outlet (With Kim Hotstart)	20406-3520	1
9	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
10	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
11	Clamp, Liner, .81 - 1.50	20427-3422	2
12	Clamp, Liner, 2.06 - 3.00	20427-3425	4
13	Clamp, Const. Torque, 2.75 - 3.0	20427-3428	4
14	Hose, Static Fill 1.0" x 44", (48/58 Models)	20428-3404-044	1
14	Hose, Static Fill 1.0" x 47", (49/59 Models)	20428-3404-047	1
14	Hose, Static Fill 1.0" x 63", (49EX Model)	20428-3404-063	1
15	Elbow 90 Deg #6 x 3/8 NPT	461481	1
16	Elbow 90 Deg #6 x 3/8 NPT	461481	1
17	Elbow 45 Deg #16AE x 1" Hose	5349-3446	1
18	Bushing, 1" NPT x 3/4 NPT	5050-3401	1
19	Adapter, 3/4 NPT x 1" Hose (attach to PN 5050-3401)	5397-3409	1
20	Hose Assy #6 Wire Braid x 40", (48/58 Models)	5732-40.0	1
20	Hose Assy #6 Wire Braid x 44", (49/59 Models)	5732-44.0	1
20	Hose Assy #6 Wire Braid x 54", (49EX Model)	5732-54.0	1
21	Hose Assy #6 Wire Braid x 42", (48/58 Models)	5732-42.0	1
21	Hose Assy #6 Wire Braid x 60", (49/59 Models)	5732-60.0	1
21	Hose Assy #6 Wire Braid x 70", (49EX Model)	5732-70.0	1
22	Mounting Bracket, Surge Tank	20013-3539	1
23	Surge Tank Assembly	20003-3416	1
-	- Surge Tank	20003-3417	1
-	- Strap	20003-3418	2
-	- Sight Glass	20301-3404	1
-	- Rad Cap, 7 psi.	20009-4404	1
24	Low Coolant Sensor, Mechanical	20301-3407	1
24	Low Coolant Sensor, Electronic	20301-3406	1

Specific BOMs listed: 3068-005-05/08, 3068-005-15/16

COOLING SYSTEM 8



RAD PIPING - 1200 RAD- DETROIT DIESEL SERIES - 60

COOLING SYSTEM

1200 RAD PIPING - DETROIT DIESEL SERIES 60

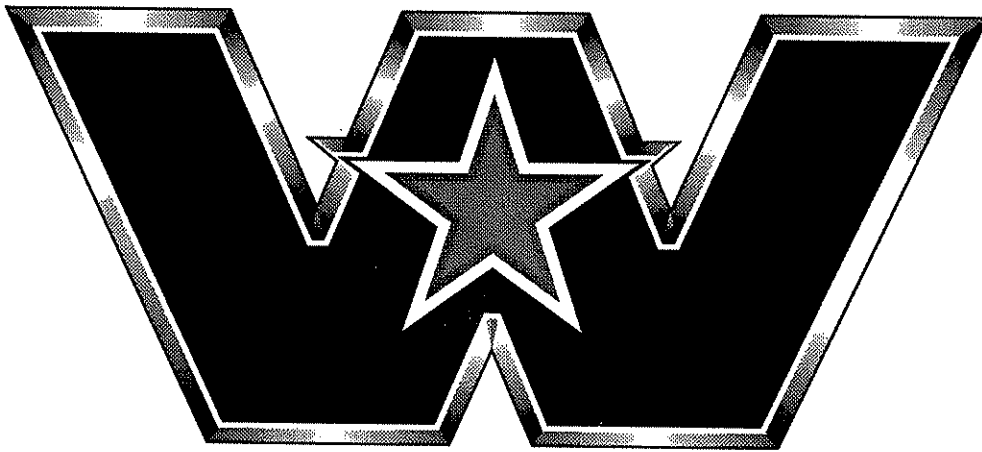
8.3.6

RAD PIPING - 1200 RAD- DETROIT DIESEL SERIES - 60

Item	Description	Part Number	Qty
1	Adapter, #6 x 1/4 NPT	118750	1
2	Elbow 90 Deg #6 x 1/4 NPT	118755	1
3	Gasket Rad Outlet	20028-3411	2
4	Pipe, Engine Inlet	20402-3437	1
5	Pipe, Rad Inlet	20403-3513	1
6	Cover Plate, Radiator	20404-3447	1
7	Adapter, Rad Outlet (Without Kim Hotstart)	20406-3517	1
8	Adapter, Rad Outlet (With Kim Hotstart)	20406-3520	1
9	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
10	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
11	Clamp, Liner, .81 - 1.50	20427-3422	2
12	Clamp, Liner, 2.06 - 3.00	20427-3425	4
13	Clamp, Const. Torque, 2.75 - 3.0	20427-3429	4
14	Hose, Static Fill 1.0" x 44", (48/58 Models)	20428-3404-044	1
14	Hose, Static Fill 1.0" x 47", (49/59 Models)	20428-3404-047	1
14	Hose, Static Fill 1.0" x 63", (49EX Model)	20428-3404-063	1
15	Elbow 90 Deg #6 x 3/8 NPT	461481	1
16	Elbow 90 Deg #6 x 3/8 NPT	461481	1
17	Elbow 45 Deg #16AE x 1" Hose	5349-3446	1
18	Adapter, 3/4 NPT x 1" Hose (attach to PN 5050-3401)	5397-3409	1
19	Bushing, 1" NPT x 3/4 NPT	5050-3401	1
20	Hose Assy #6 Wire Braid x 40", (48/58 Models)	5732-40.0	1
20	Hose Assy #6 Wire Braid x 44", (49/59 Models)	5732-44.0	1
20	Hose Assy #6 Wire Braid x 54", (49EX Model)	5732-54.0	1
21	Hose Assy #6 Wire Braid x 42", (48/58 Models)	5732-42.0	1
21	Hose Assy #6 Wire Braid x 60", (49/59 Models)	5732-60.0	1
21	Hose Assy #6 Wire Braid x 70", (49EX Model)	5732-70.0	1
22	Mounting Bracket, Surge Tank	20013-3539	1
23	Surge Tank Assembly	20003-3416	1
-	- Surge Tank	20003-3417	1
-	- Strap	20003-3418	2
-	- Sight Glass	20301-3404	1
-	- Rad Cap, 7 psi.	20009-4404	1
24	Low Coolant Sensor, Series 60	20301-3409	1

Specific BOMs listed: 3068-006-05/08, 3068-006-15/16

COOLING SYSTEM 8



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1300 RADIATOR PIPING

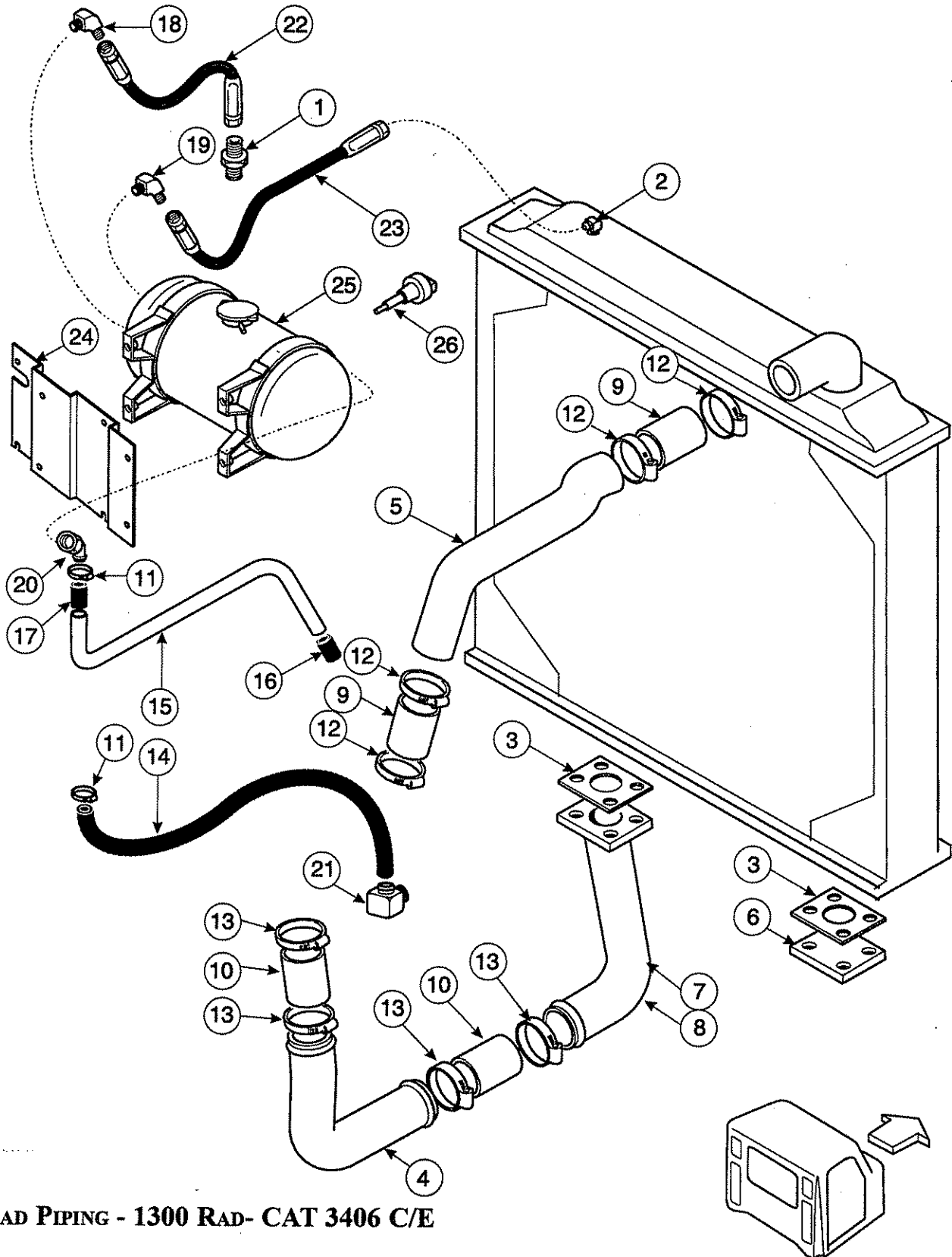
8.4

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Note: *This publication is a generic parts book. Components may vary with different applications. For applications other than listed at the bottom of the page, see the appropriate Bill of Material by truck serial number, and use this publication as a guide only.*

COOLING SYSTEM 8



RAD PIPING - 1300 RAD- CAT 3406 C/E

COOLING SYSTEM

1300 RAD PIPING - CAT 3406 C/E

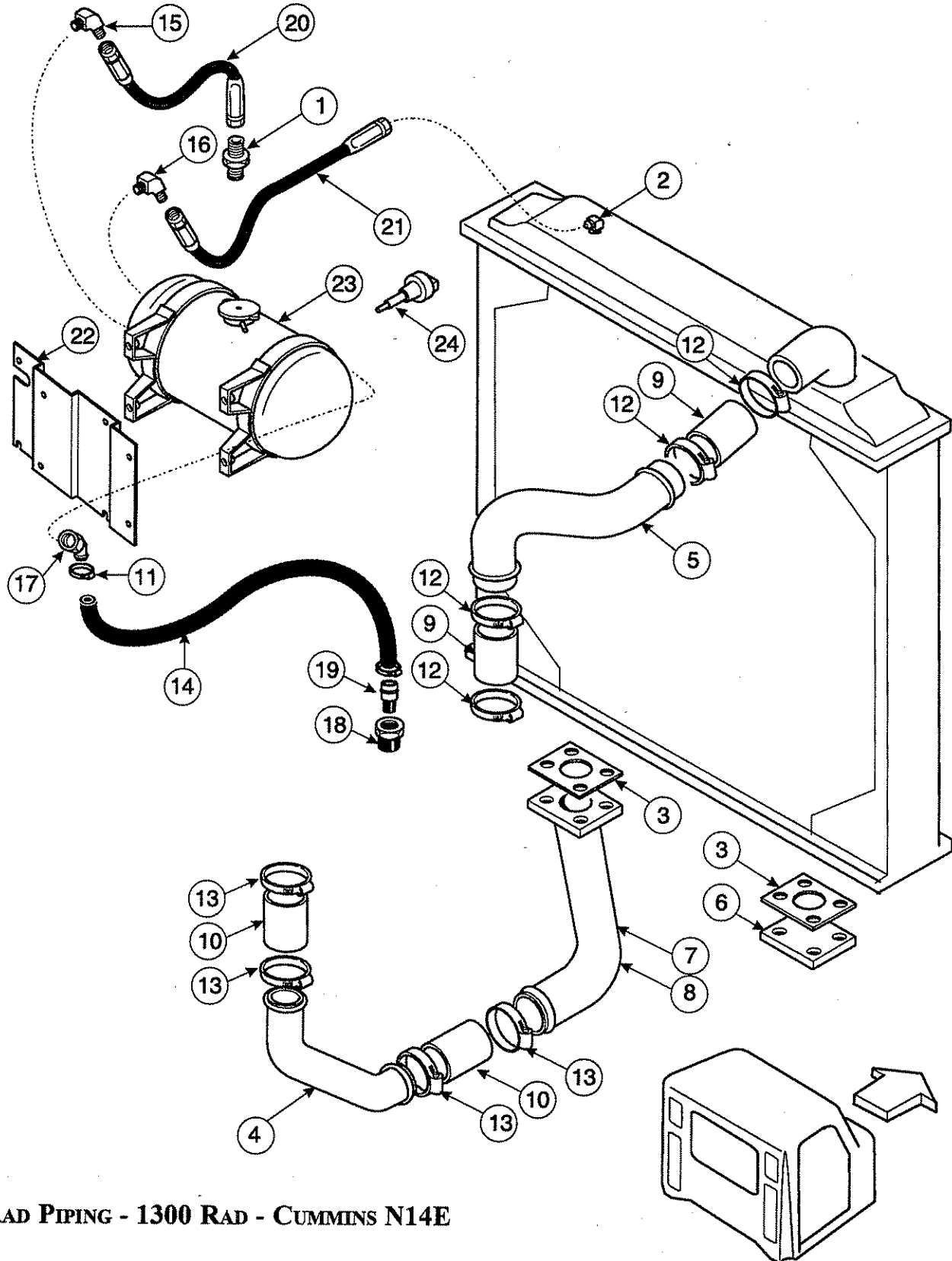
8.4.1

RAD PIPING - 1300 RAD- CAT 3406 C/E

Item	Description	Part Number	Qty
1	Adapter, #6 x 1/4 NPT	118750	1
2	Elbow 90 Deg #6 x 1/4 NPT	118755	1
3	Gasket Rad Outlet	20028-3411	2
4	Pipe, Engine Inlet	20402-3406	1
5	Pipe, Rad Inlet	20403-3521	1
6	Cover Plate, Radiator	20404-3447	1
7	Pipe, Rad Outlet (Without Kim Hotstart)	20406-3501	1
8	Pipe, Rad Outlet (With Kim Hotstart)	20406-3502	1
9	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
10	Hose, Silicone 3.0 ID x 6"	20422-3406-006	2
11	Clamp, Liner, .81 - 1.50	20427-3422	2
12	Clamp, Liner, 2.06 - 3.00	20427-3425	4
13	Clamp, Const. Torque, 2.75 - 3.0	20427-3429	4
14	Hose, Static Fill 1.0" x 44", (48/58 Models)	20428-3404-044	1
15	Tube, Surge Tank Fill, (49/59 Models)	20406-3514	1
16	Hose Silicone 1.0" ID x 5", (49/59 Models)	20422-3402-005	1
17	Hose Silicone 1.0" ID x 12", (49/59 Models)	20422-3402-012	1
18	Elbow 90 Deg #6 x 3/8 NPT	461481	1
19	Elbow 90 Deg #6 x 3/8 NPT	461481	1
20	Elbow 45 Deg #16AE x 1" Hose	5349-3446	1
21	Elbow 90 Deg 3/4 NPT x 1" Hose	5397-3405	1
22	Hose Assy #6 Wire Braid x 40", (48/58 Models)	5732-40.0	1
22	Hose Assy #6 Wire Braid x 44", (49/59 Models)	5732-44.0	1
22	Hose Assy #6 Wire Braid x 54", (49EX Models)	5732-54.0	1
23	Hose Assy #6 Wire Braid x 42", (48/58 Models)	5732-42.0	1
23	Hose Assy #6 Wire Braid x 60", (49/59 Models)	5732-60.0	1
23	Hose Assy #6 Wire Braid x 70", (49EX Models)	5732-70.0	1
24	Mounting Bracket, Surge Tank	20013-3539	1
25	Surge Tank Assembly	20003-3416	1
-	- Surge Tank	20003-3417	1
-	- Strap	20003-3418	2
-	- Sight Glass	20301-3404	1
-	- Rad Cap, 7 psi.	20009-4404	1
26	Low Coolant Sensor, Mechanical	20301-3407	1
26	Low Coolant Sensor, Electronic	20301-3406	1

Specific BOMs listed: 3068-003-09/12, 3068-003-17/18

COOLING SYSTEM 8



RAD PIPING - 1300 RAD - CUMMINS N14E

COOLING SYSTEM

1300 RAD PIPING - CUMMINS N14E

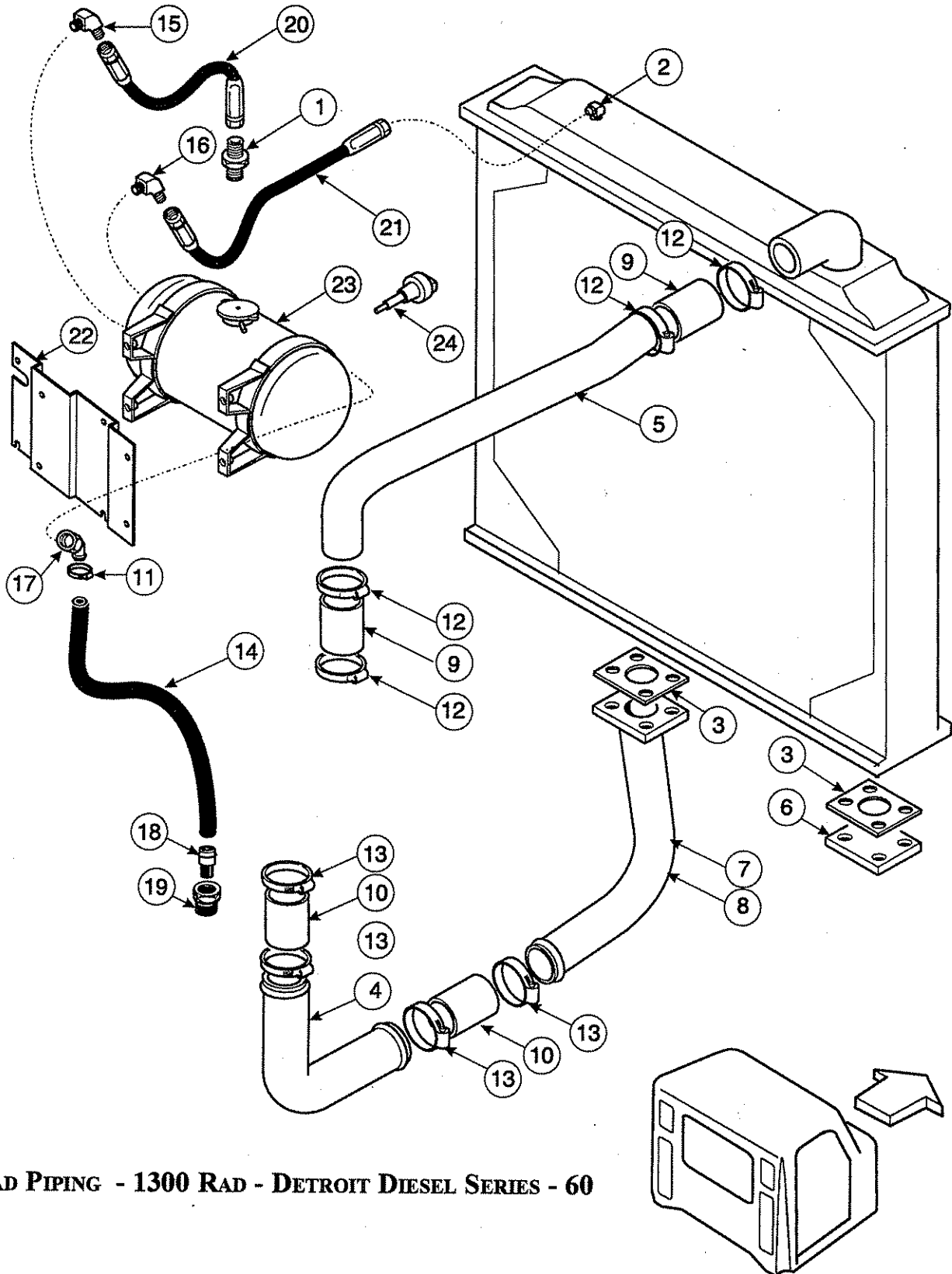
8.4.2

RAD PIPING - 1300 RAD - CUMMINS N14E

Item	Description	Part Number	Qty
1	Adapter, #6 x 1/4 NPT	118750	1
2	Elbow 90 Deg #6 x 1/4 NPT	118755	1
3	Gasket Rad Outlet	20028-3411	2
4	Pipe, Engine Inlet	20402-3416	1
5	Pipe, Rad Inlet	20403-3520	1
6	Cover Plate, Radiator	20404-3447	1
7	Adapter, Rad Outlet (Without Kim Hotstart)	20406-3517	1
8	Adapter, Rad Outlet (With Kim Hotstart)	20406-3520	1
9	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
10	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
11	Clamp, Liner, .81 - 1.50	20427-3422	2
12	Clamp, Liner, 2.06 - 3.00	20427-3425	4
13	Clamp, Const. Torque, 2.25 - 3.0	20427-3428	4
14	Hose, Static Fill 1.0" x 44", (48/58 Models)	20428-3404-044	1
14	Hose, Static Fill 1.0" x 47", (49/59 Models)	20428-3404-047	1
14	Hose, Static Fill 1.0" x 63", (49EX Model)	20428-3404-063	1
15	Elbow 90 Deg #6 x 3/8 NPT	461481	1
16	Elbow 90 Deg #6 x 3/8 NPT	461481	1
17	Elbow 45 Deg #16AE x 1" Hose	5349-3446	1
18	Bushing, 1" NPT x 3/4 NPT	5050-3401	1
19	Adapter, 3/4 NPT x 1" Hose (attach to PN 5050-3401)	5397-3409	1
20	Hose Assy #6 Wire Braid x 40", (48/58 Models)	5732-40.0	1
20	Hose Assy #6 Wire Braid x 44", (49/59 Models)	5732-44.0	1
20	Hose Assy #6 Wire Braid x 54", (49EX Models)	5732-54.0	1
21	Hose Assy #6 Wire Braid x 42", (48/58 Models)	5732-42.0	1
21	Hose Assy #6 Wire Braid x 60", (49/59 Models)	5732-60.0	1
21	Hose Assy #6 Wire Braid x 70", (49EX Models)	5732-70.0	1
22	Mounting Bracket, Surge Tank	20013-3539	1
23	Surge Tank Assembly	20003-3416	1
	- Surge Tank	20003-3417	1
	- Strap	20003-3418	2
	- Sight Glass	20301-3404	1
	- Rad Cap, 7 psi.	20009-4404	1
24	Low Coolant Sensor, Mechanical	20301-3407	1
24	Low Coolant Sensor, Electronic	20301-3406	1

Specific BOMs listed: 3068-005-09/12, 3068-005-17/18

COOLING SYSTEM 8



RAD PIPING - 1300 RAD - DETROIT DIESEL SERIES - 60

COOLING SYSTEM

8.4.3

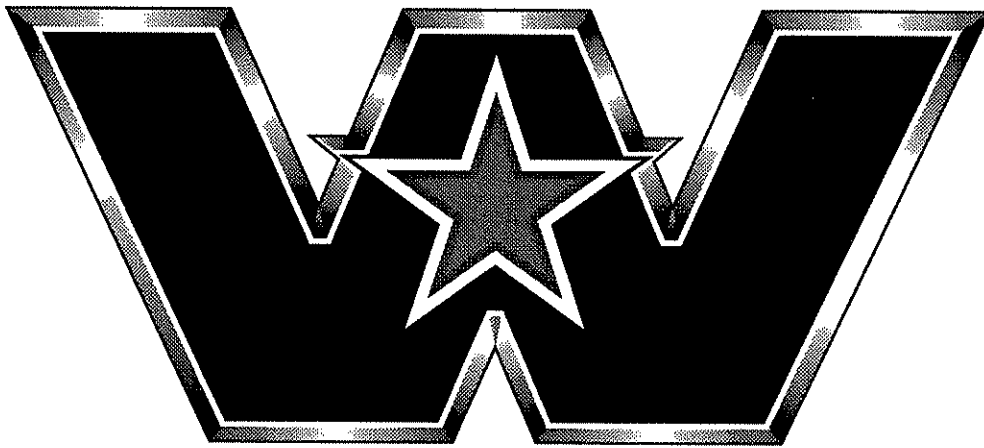
1300 RAD PIPING - DETROIT DIESEL SERIES - 60

RAD PIPING - 1300 RAD - DETROIT DIESEL SERIES - 60

Item	Description	Part Number	Qty
1	Adapter, #6 x 1/4 NPT	118750	1
2	Elbow 90 Deg #6 x 1/4 NPT	118755	1
3	Gasket Rad Outlet	20028-3411	2
4	Pipe, Engine Inlet	20402-3437	1
5	Pipe, Rad Inlet	20403-3519	1
6	Cover Plate, Radiator	20404-3447	1
7	Adapter, Rad Outlet (Without Kim Hotstart)	20406-3517	1
8	Adapter, Rad Outlet (With Kim Hotstart)	20406-3520	1
9	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
10	Hose, Silicone 2.5 ID x 5"	20422-3405-005	2
11	Clamp, Liner, .81 - 1.50	20427-3422	2
12	Clamp, Liner, 2.06 - 3.00	20427-3425	4
13	Clamp, Const. Torque, 2.75 - 3.0	20427-3429	4
14	Hose, Static Fill 1.0" x 44", (48/58 Models)	20428-3404-044	1
14	Hose, Static Fill 1.0" x 47", (49/59 Models)	20428-3404-047	1
14	Hose, Static Fill 1.0" x 63", (49EX Models)	20428-3404-063	1
15	Elbow 90 Deg #6 x 3/8 NPT	461481	1
16	Elbow 90 Deg #6 x 3/8 NPT	461481	1
17	Elbow 45 Deg #16AE x 1" Hose	5349-3446	1
18	Adapter, 3/4 NPT x 1" Hose (attach to PN 5050-3401)	5397-3409	1
19	Bushing, 1" NPT x 3/4 NPT	5050-3401	1
20	Hose Assy #6 Wire Braid x 40", (48/58 Models)	5732-40.0	1
20	Hose Assy #6 Wire Braid x 44", (49/59 Models)	5732-44.0	1
20	Hose Assy #6 Wire Braid x 54", (49EX Models)	5732-54.0	1
21	Hose Assy #6 Wire Braid x 42", (48/58 Models)	5732-42.0	1
21	Hose Assy #6 Wire Braid x 60", (49/59 Models)	5732-60.0	1
21	Hose Assy #6 Wire Braid x 70", (49EX Models)	5732-70.0	1
22	Mounting Bracket, Surge Tank	20013-3539	1
23	Surge Tank Assembly	20003-3416	1
-	- Surge Tank	20003-3417	1
-	- Strap	20003-3418	2
-	- Sight Glass	20301-3404	1
-	- Rad Cap, 7 psi.	20009-4404	1
24	Low Coolant Sensor, Series 60	20301-3409	1

Specific BOMs listed: 3068-006-09/12, 3068-006-17/18

COOLING SYSTEM 8



WESTERN STAR TRUCKS®
The Preferred Choice™

COOLING SYSTEM

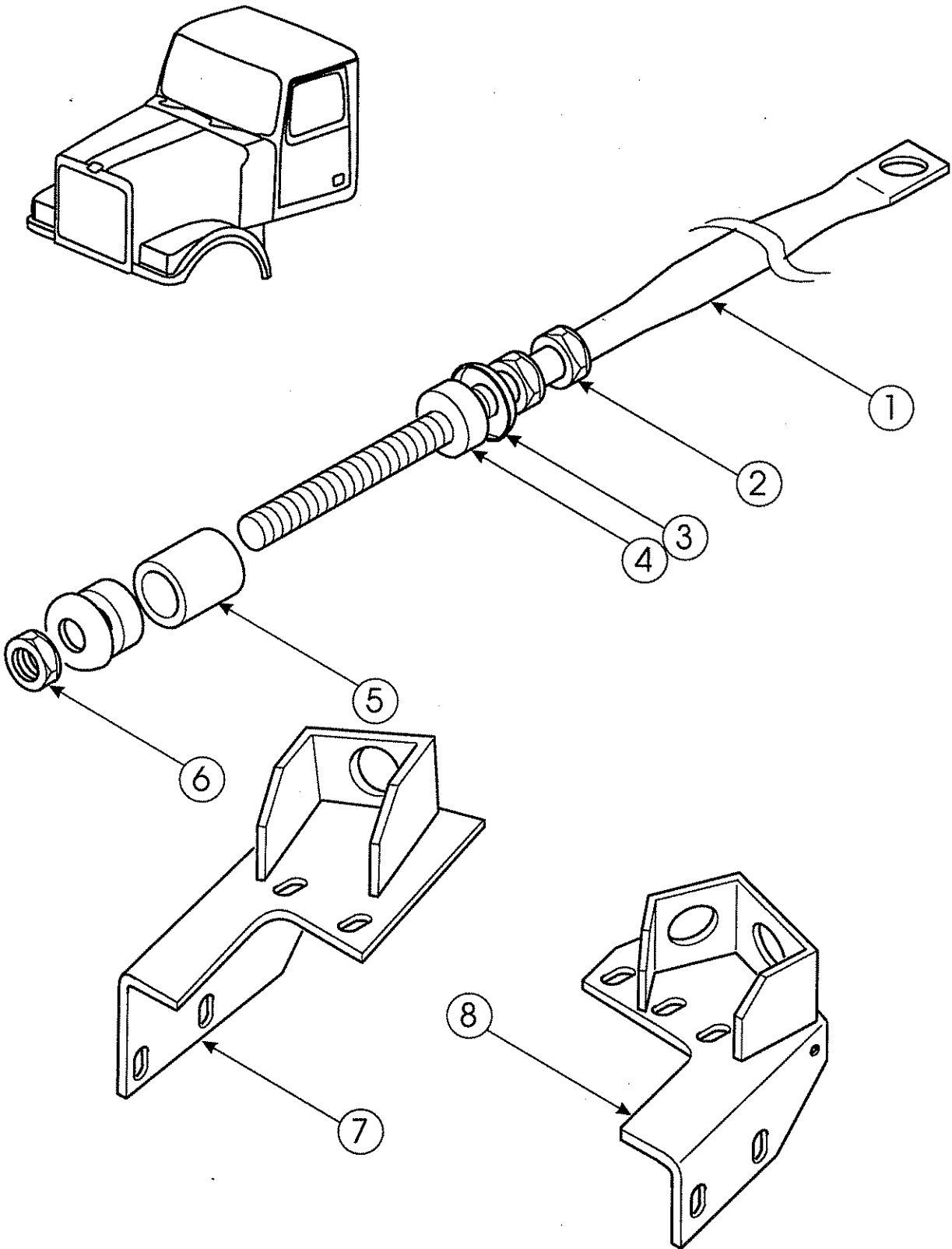
RADIATOR TIE RODS - FIREWALL MOUNTED

8.7

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Note: *This publication is a generic parts book. Components may vary with different applications. For applications other than listed below the parts listings see the appropriate Bill of Material by truck serial number and use this publication as a guide only.*



COOLING SYSTEM

8.7.1

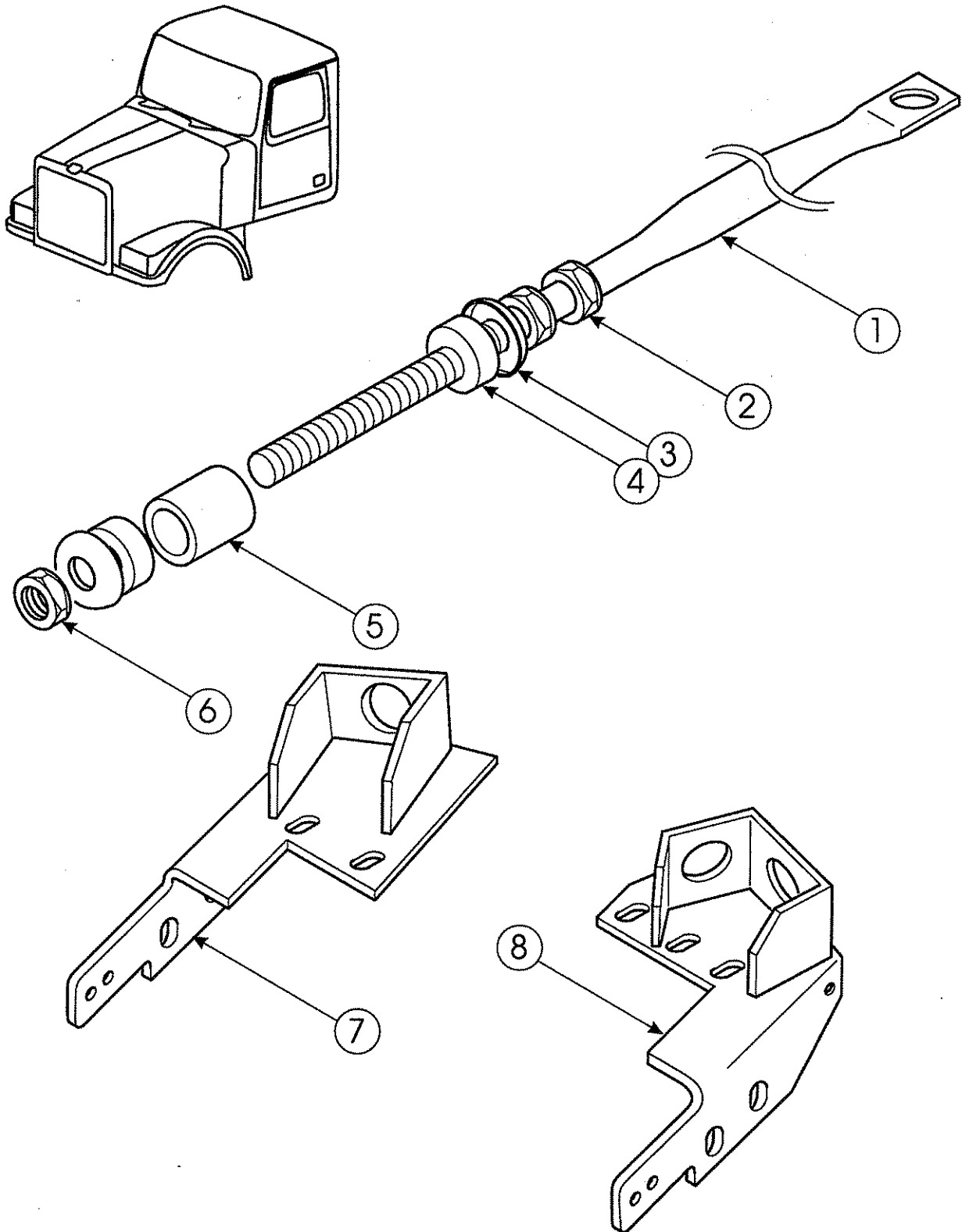
RADIATOR TIE RODS - FIREWALL MOUNTED

RAD TIE RODS - 1100/1200 48FX, 58SS, HOOD MOUNTED GRILLE

Item	Description	Part Number	Qty
1	Rad Tie Rod RH Side, 23.6" Installed	20201-3465-26.5	1
1	Rad Tie Rod, LH Side, 32.9" Installed	20201-3465-35.0	1
1	Rad Tie Rod, Diagonal, 45.5" Installed	20201-3465-47.5	1
2	Nut, Hex Std Znc .50 - 20	120371	6
3	Retainer, Isolator	7130093	6
4	Isolator, Rad Rod	20210-3402	6
5	Spacer, Rad Rod	20203-3494	3
6	Nut, Elastic Stop, .50 - 20UN	656141	3
7	Bracket, Rad Rod Front RH, 48XX	20203-3478	1
8	Bracket, Rad Rod Front LH, 48XX	20203-3556	1

Specific BOMs listed: 3059-001-01

COOLING SYSTEM 8



COOLING SYSTEM

8.7.1

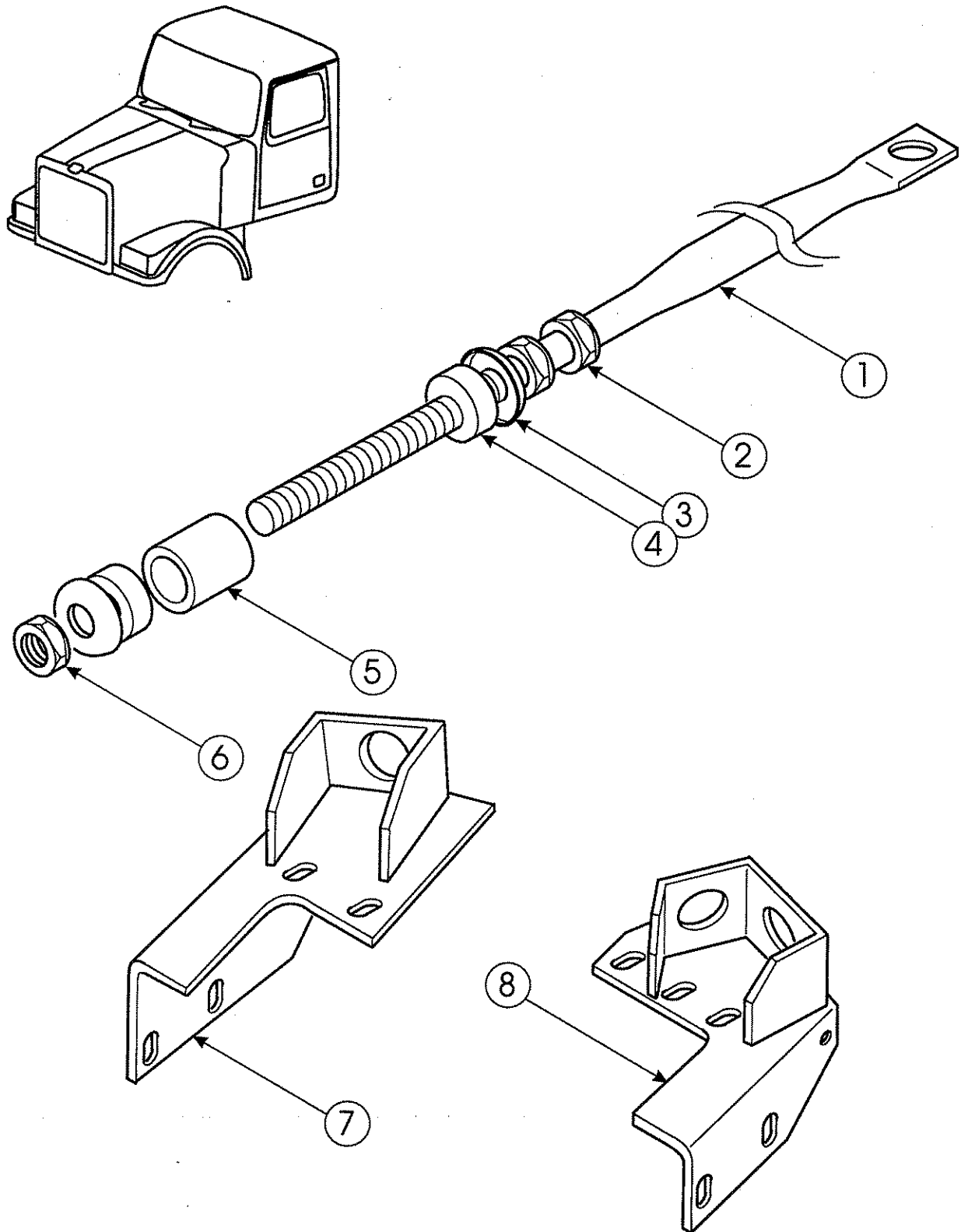
RADIATOR TIE RODS - FIREWALL MOUNTED

RAD TIE RODS - 1100/1200, 48FX, 58SS, STATIONARY GRILLE

Item	Description	Part Number	Qty
1	Rad Tie Rod RH Side, 23.9" Installed	20201-3465-26.5	1
1	Rad Tie Rod, LH Side, 32.9" Installed	20201-3465-35.0	1
1	Rad Tie Rod, Diagonal, 44.38" Installed	20201-3465-47.5	1
2	Nut, Hex Std Znc .50 - 20	120371	6
3	Retainer, Isolator	7130093	6
4	Isolator, Rad Rod	20210-3402	6
5	Spacer, Rad Rod	20203-3494	3
6	Nut, Elastic Stop, .50 - 20UN	656141	3
7	Bracket, Rad Rod Front RH, 48XX	20203-3537	1
8	Bracket, Rad Rod Front LH, 48XX	20203-3558	1

Specific BOMs listed: 3059-001-02

COOLING SYSTEM 8



COOLING SYSTEM

RADIATOR TIE RODS - FIREWALL MOUNTED

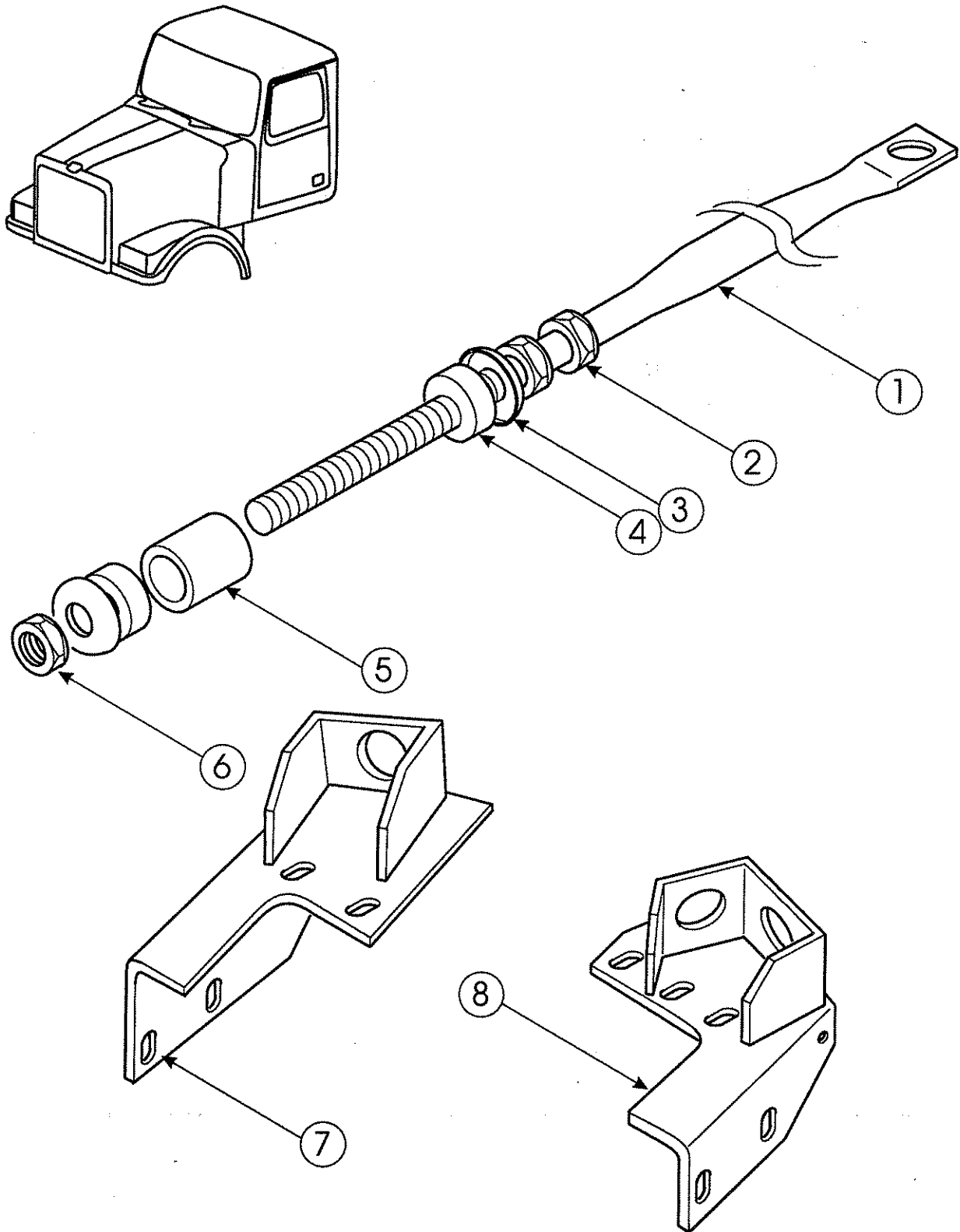
8.7.1

RAD TIE RODS - 1100/1200 49FX, 49SX, 49MX, 59SS, HOOD MOUNTED GRILLE

Item	Description	Part Number	Qty
1	Rad Tie Rod RH Side, 37.5" Installed	20201-3465-40.5	1
1	Rad Tie Rod, LH Side, 46.5" Installed	20201-3465-49.5	1
1	Rad Tie Rod, Diagonal, 53.3" Installed	20201-3465-56.0	1
2	Nut, Hex Std Znc .50 - 20	120371	6
3	Retainer, Isolator	7130093	6
4	Isolator, Rad Rod	20210-3402	6
5	Spacer, Rad Rod	20203-3494	3
6	Nut, Elastic Stop, .50 - 20UN	656141	3
7	Bracket, Rad Rod Front RH, 49XX	20203-3476	1
8	Bracket, Rad Rod Front LH, 49XX	20203-3557	1

Specific BOMs listed: 3059-001-03

COOLING SYSTEM 8



COOLING SYSTEM

RADIATOR TIE RODS - FIREWALL MOUNTED

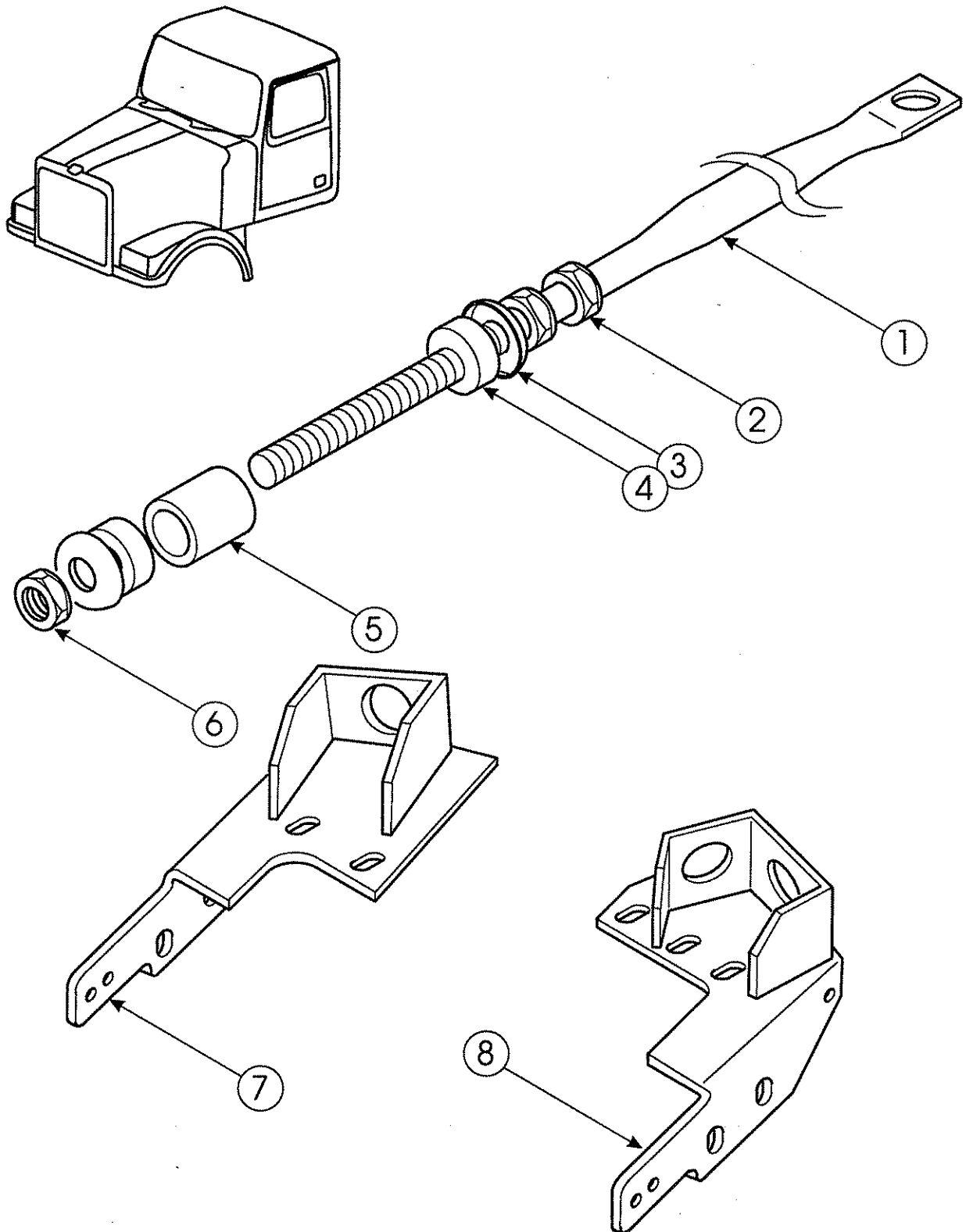
8.7.1

RAD TIE RODS - 1300, 49FX, 49SX, HOOD MOUNTED GRILLE

Item	Description	Part Number	Qty
1	Rad Tie Rod RH Side, 37.5" Installed	20201-3465-40.5	1
1	Rad Tie Rod, LH Side, 46.5" Installed	20201-3465-49.5	1
1	Rad Tie Rod, Diagonal, 53.3" Installed	20201-3465-56.0	1
2	Nut, Hex Std Znc .50 - 20	120371	6
3	Retainer, Isolator	7130093	6
4	Isolator, Rad Rod	20210-3402	6
5	Spacer, Rad Rod	20203-3494	3
6	Nut, Elastic Stop, .50 - 20UN	656141	3
7	Bracket, Rad Rod Front 1300 RH, 49XX	20203-3561	1
8	Bracket, Rad Rod Front 1300 LH, 49XX	20203-3560	1

Specific BOMs listed: 3059-001-04

COOLING SYSTEM 8

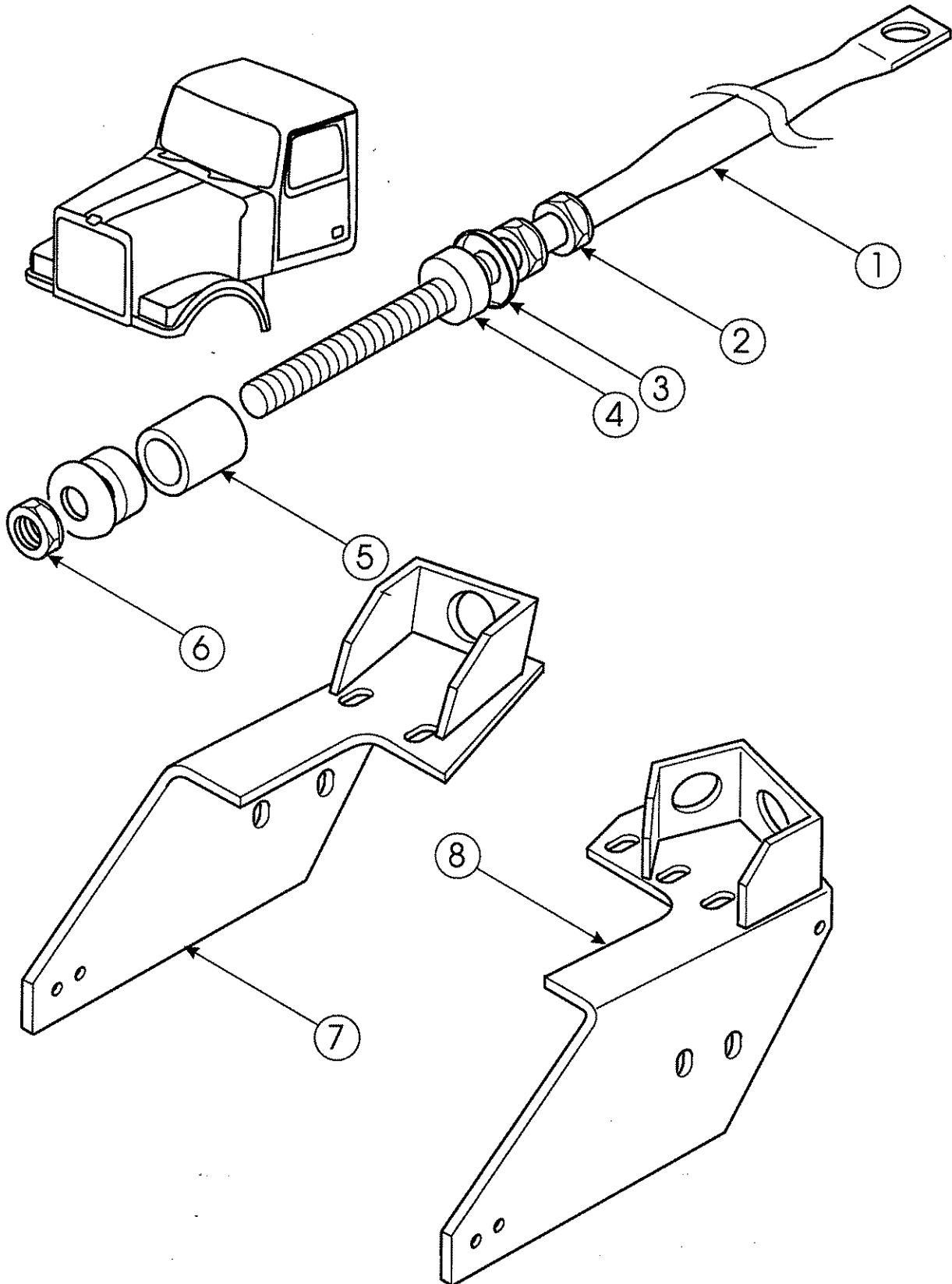


RADIATOR TIE RODS - FIREWALL MOUNTED

RAD TIE RODS - 1100, 1200, 49FX, 49SX, 49MX, 59SS, STATIONARY GRILLE

Item	Description	Part Number	Qty
1	Rad Tie Rod RH Side, 37.5" Installed	20201-3465-40.5	1
1	Rad Tie Rod, LH Side, 46.5" Installed	20201-3465-49.5	1
1	Rad Tie Rod, Diagonal, 53.3" Installed	20201-3465-56.0	1
2	Nut, Hex Std Znc .50 - 20	120371	6
3	Retainer, Isolator	7130093	6
4	Isolator, Rad Rod	20210-3402	6
5	Spacer, Rad Rod	20203-3494	3
6	Nut, Elastic Stop, .50 - 20UN	656141	3
7	Bracket, Rad Rod Front RH, 49XX	20203-3535	1
8	Bracket, Rad Rod Front LH, 49XX	20203-3559	1

Specific BOMs listed: 3059-001-05



COOLING SYSTEM

RADIATOR TIE RODS - FIREWALL MOUNTED

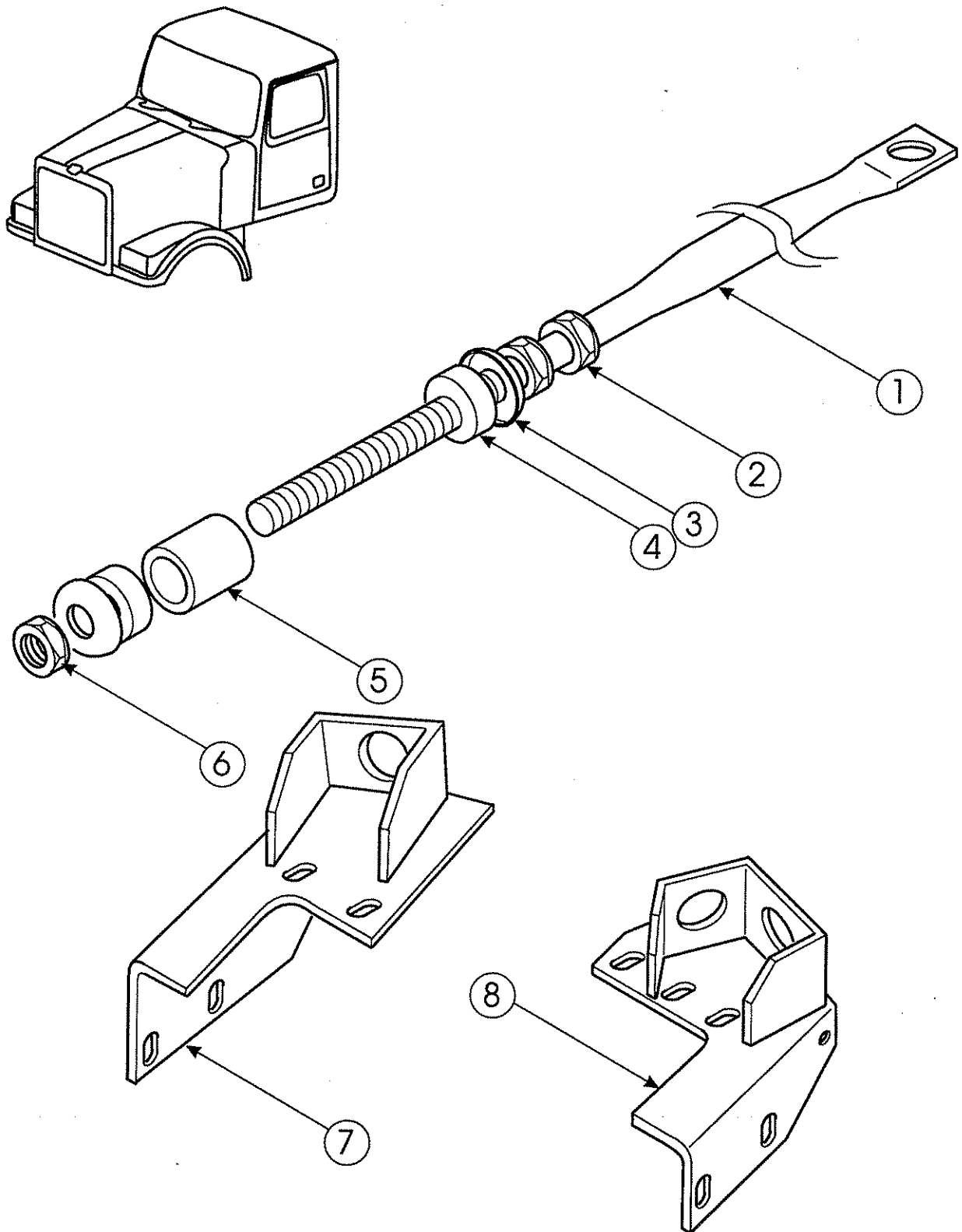
8.7.1

RAD TIE RODS - 1300, 49FX, 49SX, STATIONARY GRILLE

Item	Description	Part Number	Qty
1	Rad Tie Rod RH Side, 37.5" Installed	20201-3465-40.5	1
1	Rad Tie Rod, LH Side, 46.5" Installed	20201-3465-49.5	1
1	Rad Tie Rod, Diagonal, 53.3" Installed	20201-3465-56.0	1
2	Nut, Hex Std Znc .50 - 20	120371	6
3	Retainer, Isolator	7130093	6
4	Isolator, Rad Rod	20210-3402	6
5	Spacer, Rad Rod	20203-3494	3
6	Nut, Elastic Stop, .50 - 20UN	656141	3
7	Bracket, Rad Rod Front 1300 RH, 49XX	20203-3563	1
8	Bracket, Rad Rod Front 1300 LH, 49XX	20203-3562	1

Specific BOMs listed: 3059-001-06

COOLING SYSTEM 8



COOLING SYSTEM

RADIATOR TIE RODS - FIREWALL MOUNTED

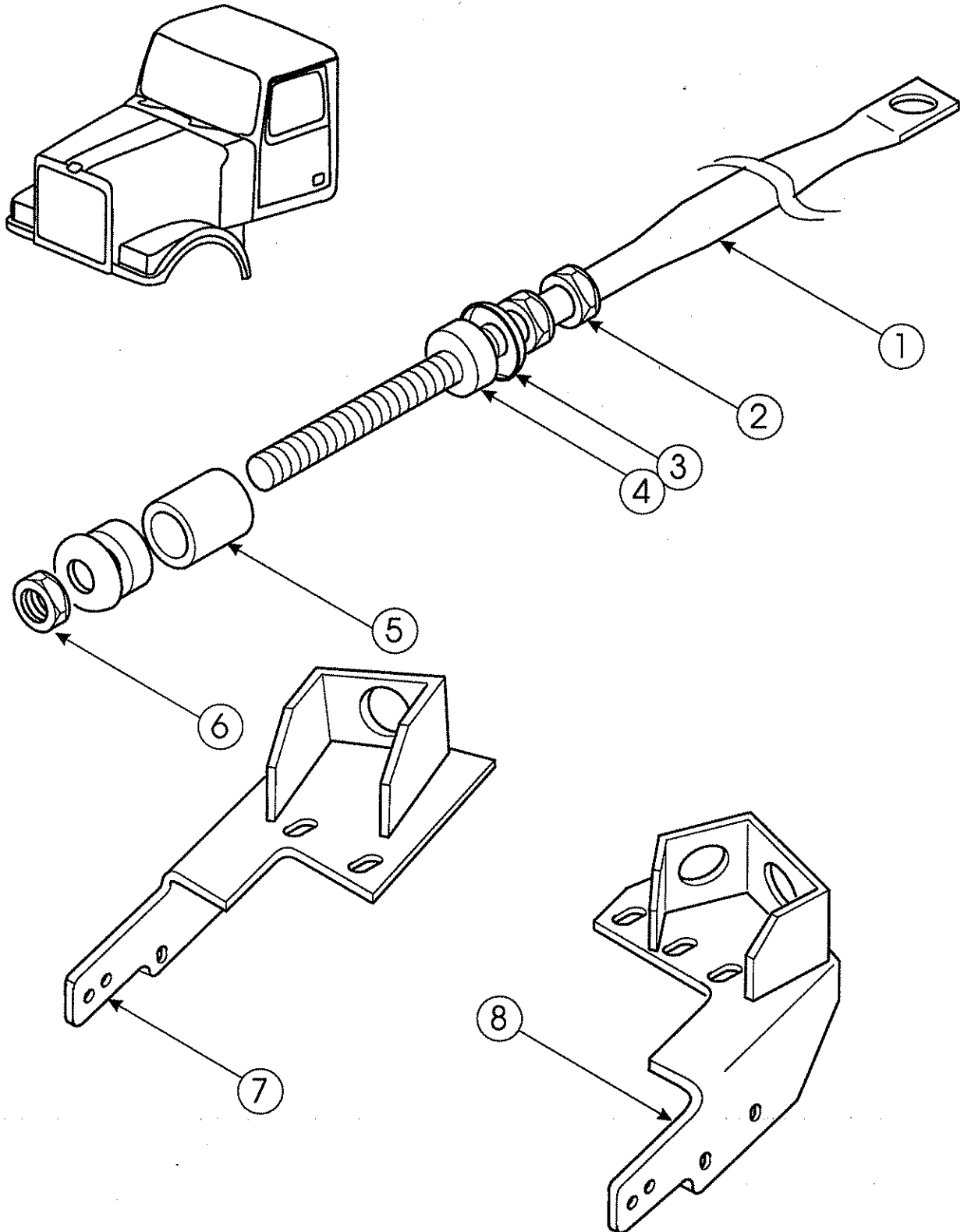
8.7.1

RAD TIE RODS - 1100, 1200, 49EX, HOOD MOUNTED GRILLE

Item	Description	Part Number	Qty
1	Rad Tie Rod RH Side, 46.2" Installed	20201-3465-49.5	1
1	Rad Tie Rod, LH Side, 55.1" Installed	20201-3465-58.0	1
1	Rad Tie Rod, Diagonal, 59.88" Installed	20201-3465-63.0	1
2	Nut, Hex Std Znc .50 - 20	120371	6
3	Retainer, Isolator	7130093	6
4	Isolator, Rad Rod	20210-3402	6
5	Spacer, Rad Rod	20203-3494	3
6	Nut, Elastic Stop, .50 - 20UN	656141	3
7	Bracket, Rad Rod Front RH, 49XX	20203-3476	1
8	Bracket, Rad Rod Front LH, 49XX	20203-3557	1

Specific BOMs listed: 3059-001-07

COOLING SYSTEM 8



COOLING SYSTEM

RADIATOR TIE RODS - FIREWALL MOUNTED

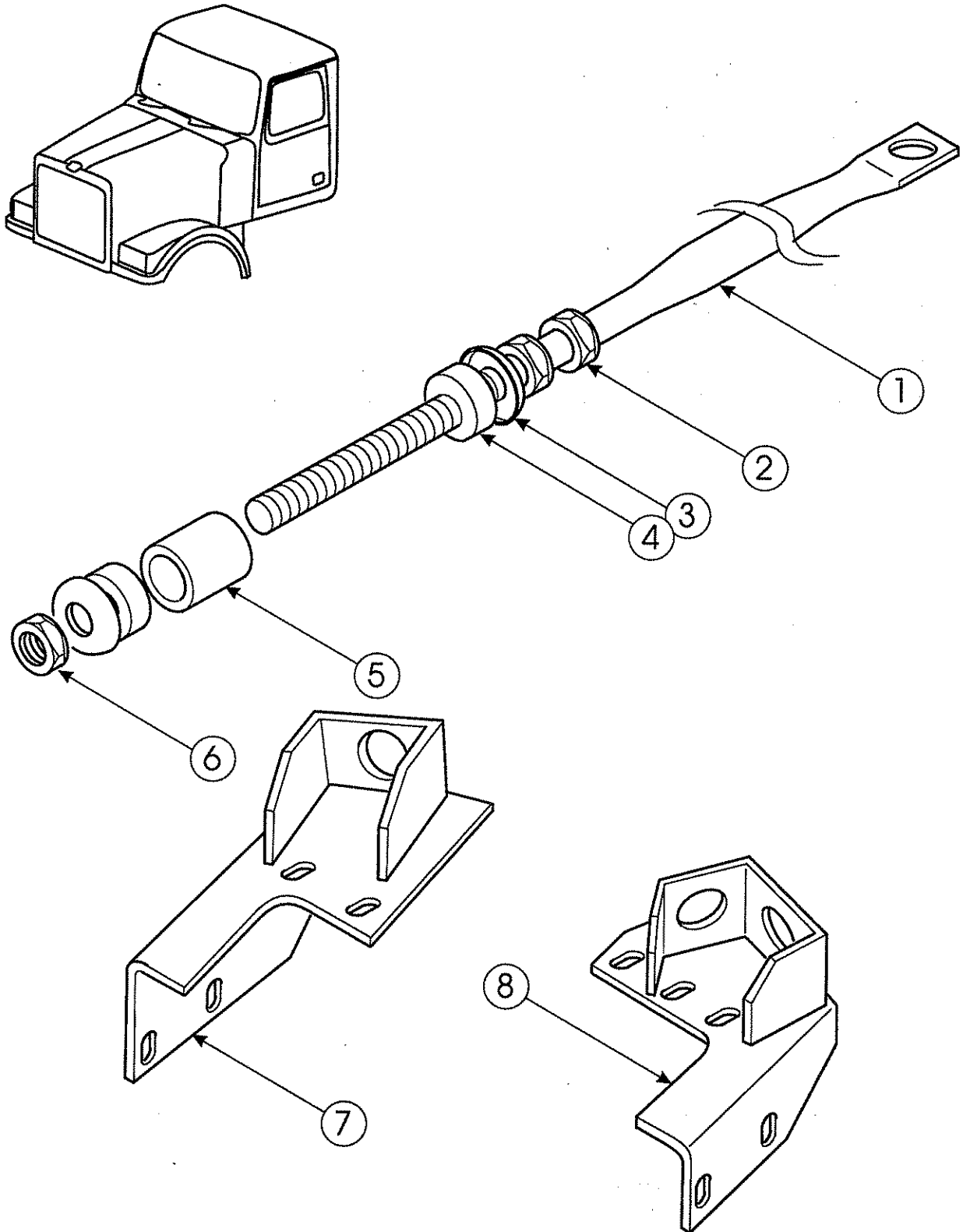
8.7.1

RAD TIE RODS - 1100, 1200, 49EX, STATIONARY GRILLE

Item	Description	Part Number	Qty
1	Rad Tie Rod RH Side, 46.2" Installed	20201-3465-49.5	1
1	Rad Tie Rod, LH Side, 55.1" Installed	20201-3465-58.0	1
1	Rad Tie Rod, Diagonal, 59.88" Installed	20201-3465-63.0	1
2	Nut, Hex Std Znc .50 - 20	120371	6
3	Retainer, Isolator	7130093	6
4	Isolator, Rad Rod	20210-3402	6
5	Spacer, Rad Rod	20203-3494	3
6	Nut, Elastic Stop, .50 - 20UN	656141	3
7	Bracket, Rad Rod Front RH, 49XX	20203-3535	1
8	Bracket, Rad Rod Front LH, 49XX	20203-3559	1

Specific BOMs listed: 3059-001-08

COOLING SYSTEM 8

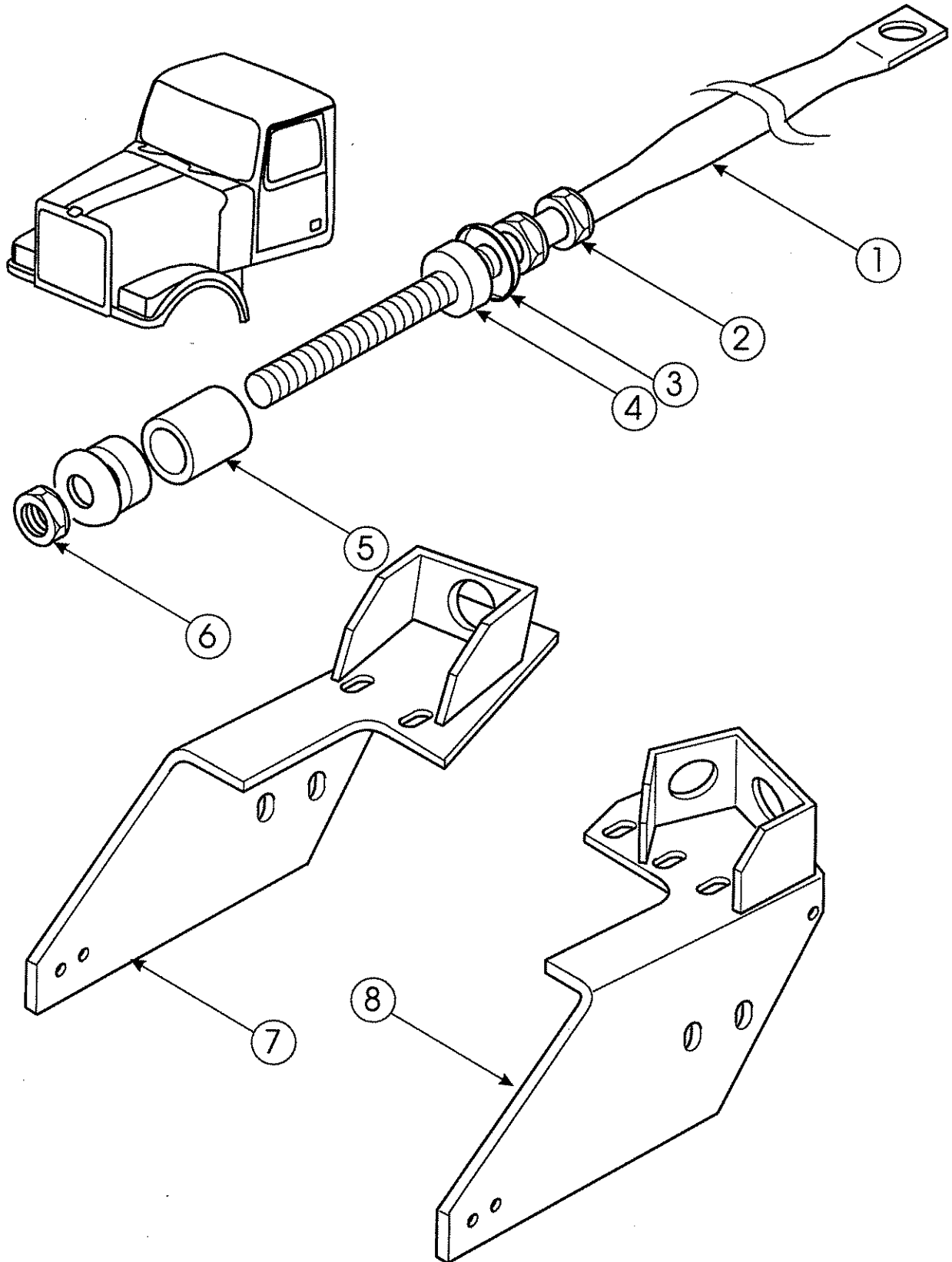


RADIATOR TIE RODS - FIREWALL MOUNTED

RAD TIE RODS - 1300, 49EX, HOOD MOUNTED GRILLE

Item	Description	Part Number	Qty
1	Rad Tie Rod RH Side, 46.2" Installed	20201-3465-49.5	1
1	Rad Tie Rod, LH Side, 55.1" Installed	20201-3465-58.0	1
1	Rad Tie Rod, Diagonal, 59.88" Installed	20201-3465-63.0	1
2	Nut, Hex Std Znc .50 - 20	120371	6
3	Retainer, Isolator	7130093	6
4	Isolator, Rad Rod	20210-3402	6
5	Spacer, Rad Rod	20203-3494	3
6	Nut, Elastic Stop, .50 - 20UN	656141	3
7	Bracket, Rad Rod Front 1300 RH, 49XX	20203-3561	1
8	Bracket, Rad Rod Front 1300 LH, 49XX	20203-3560	1

Specific BOMs listed: 3059-001-09

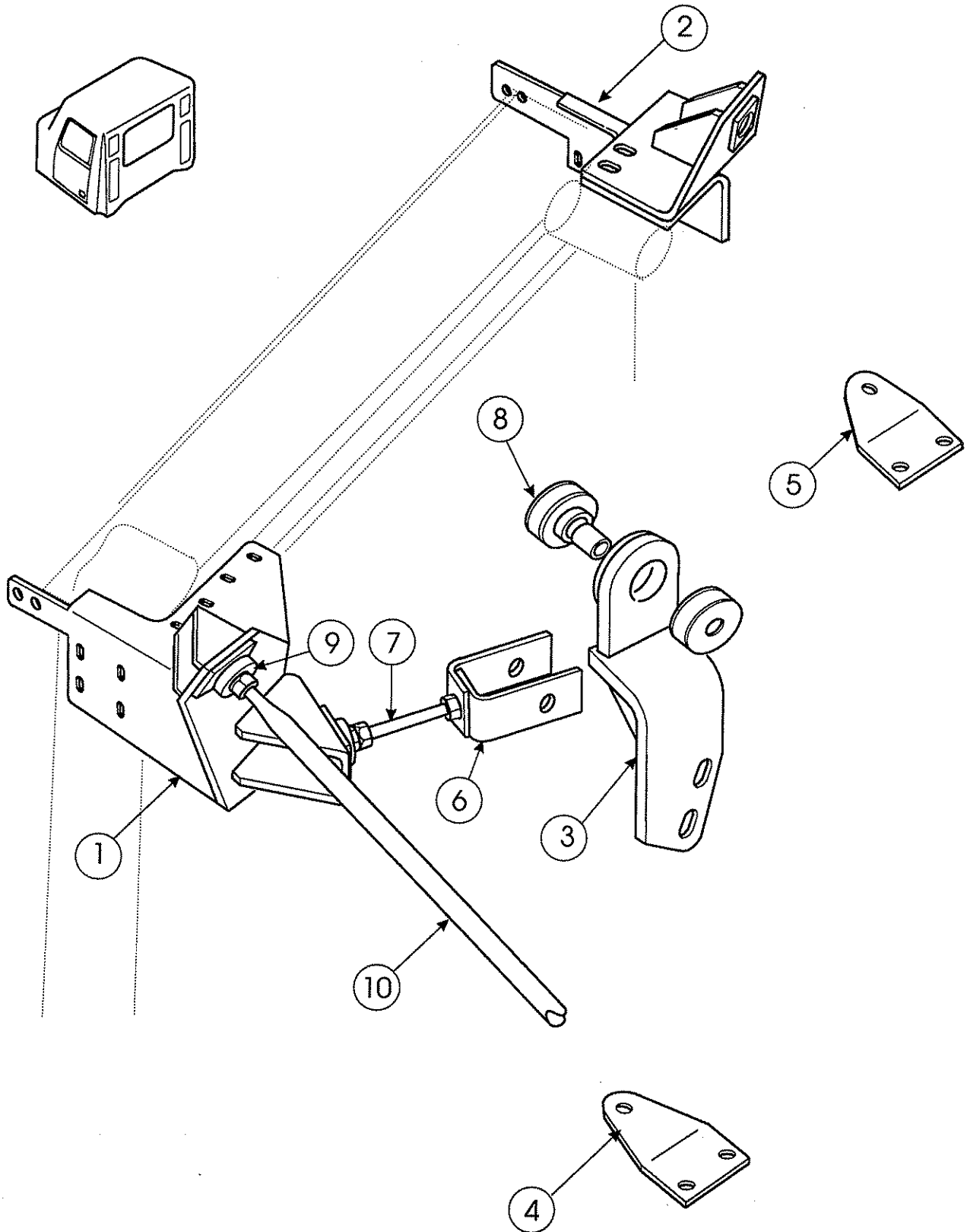


RADIATOR TIE RODS - FIREWALL MOUNTED

RAD TIE RODS - 1300, 49EX, STATIONARY GRILLE

Item	Description	Part Number	Qty
1	Rad Tie Rod, RH Side, 46.2" Installed	20201-3465-49.5	1
1	Rad Tie Rod, LH Side, 55.1" Installed	20201-3465-58.0	1
1	Rad Tie Rod, Diagonal, 59.88" Installed	20201-3465-63.0	1
2	Nut, Hex Std Znc .50 - 20	120371	6
3	Retainer, Isolator	7130093	6
4	Isolator, Rad Rod	20210-3402	6
5	Spacer, Rad Rod	20203-3494	3
6	Nut, Elastic Stop, .50 - 20UN	656141	3
7	Bracket, Rad Rod Front 1300 RH, 49XX	20203-3563	1
8	Bracket, Rad Rod Front 1300 LH, 49XX	20203-3562	1

Specific BOMs listed: 3059-001-10



COOLING SYSTEM

RADIATOR TIE RODS - FRAME MOUNTED

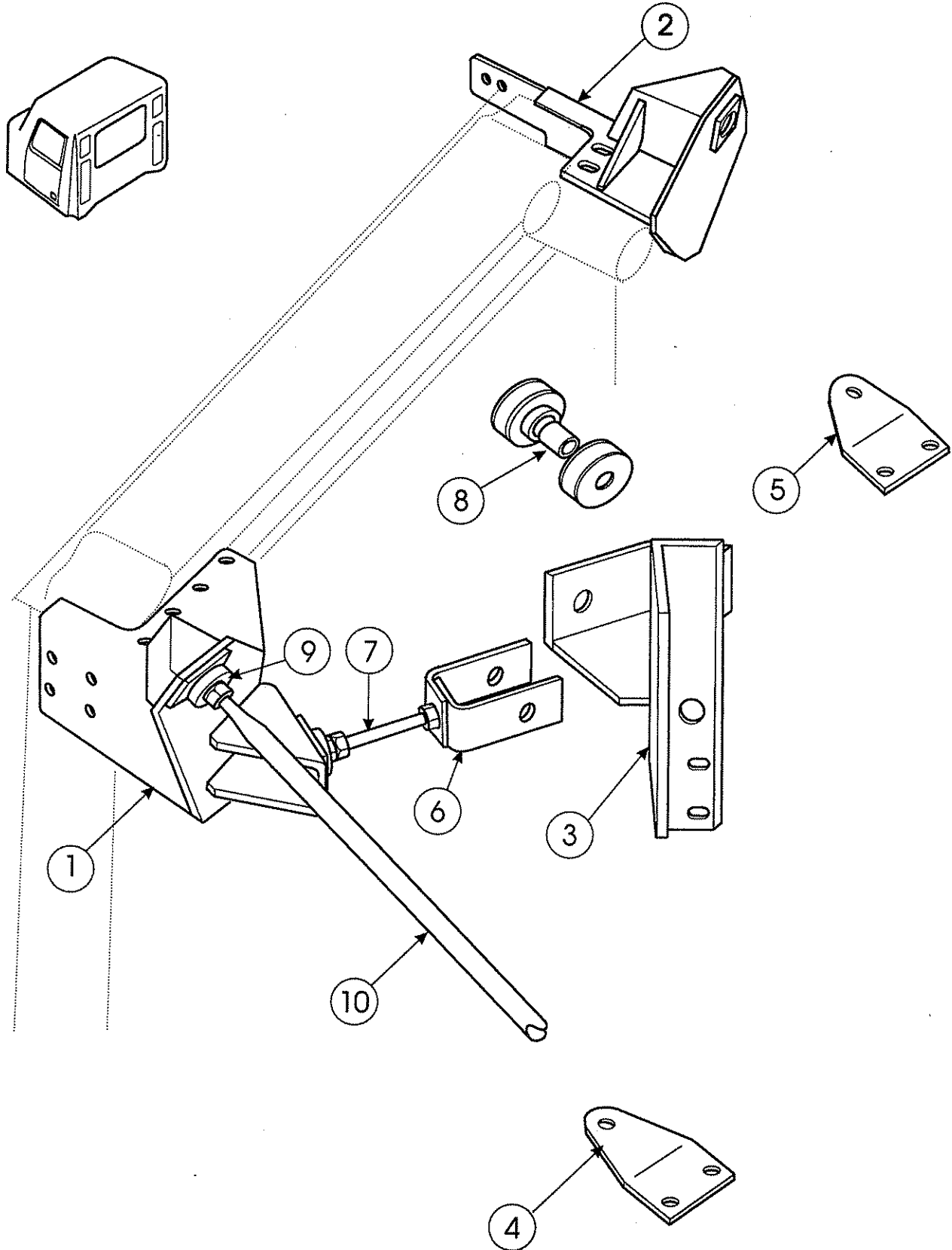
8.7.2

RAD TIE RODS - 49FX, 1100/1200 RAD, CAT 3406C

Item	Description	Part Number	Qty
1	Bracket, LH Rad	20203-3571	1
2	Bracket, RH Rad	20203-3581	1
3	Bracket, Engine	20203-3554	1
4	Bracket, Frame LH	20203-3549	1
5	Bracket, Frame RH	20203-3553	1
6	Bracket, Tie Rod	20201-3484	2
7	Rad Tie Rod, Rad to Engine	20201-3483	1
8	Kit, Safetied Sandwich	63390-3411	1
9	Isolator	509860	6
10	Rad Tie Rod 62.5"	20201-3482-62.5	2

Specific BOMs listed: 3059-001-13

COOLING SYSTEM 8



COOLING SYSTEM

RADIATOR TIE RODS - FRAME MOUNTED

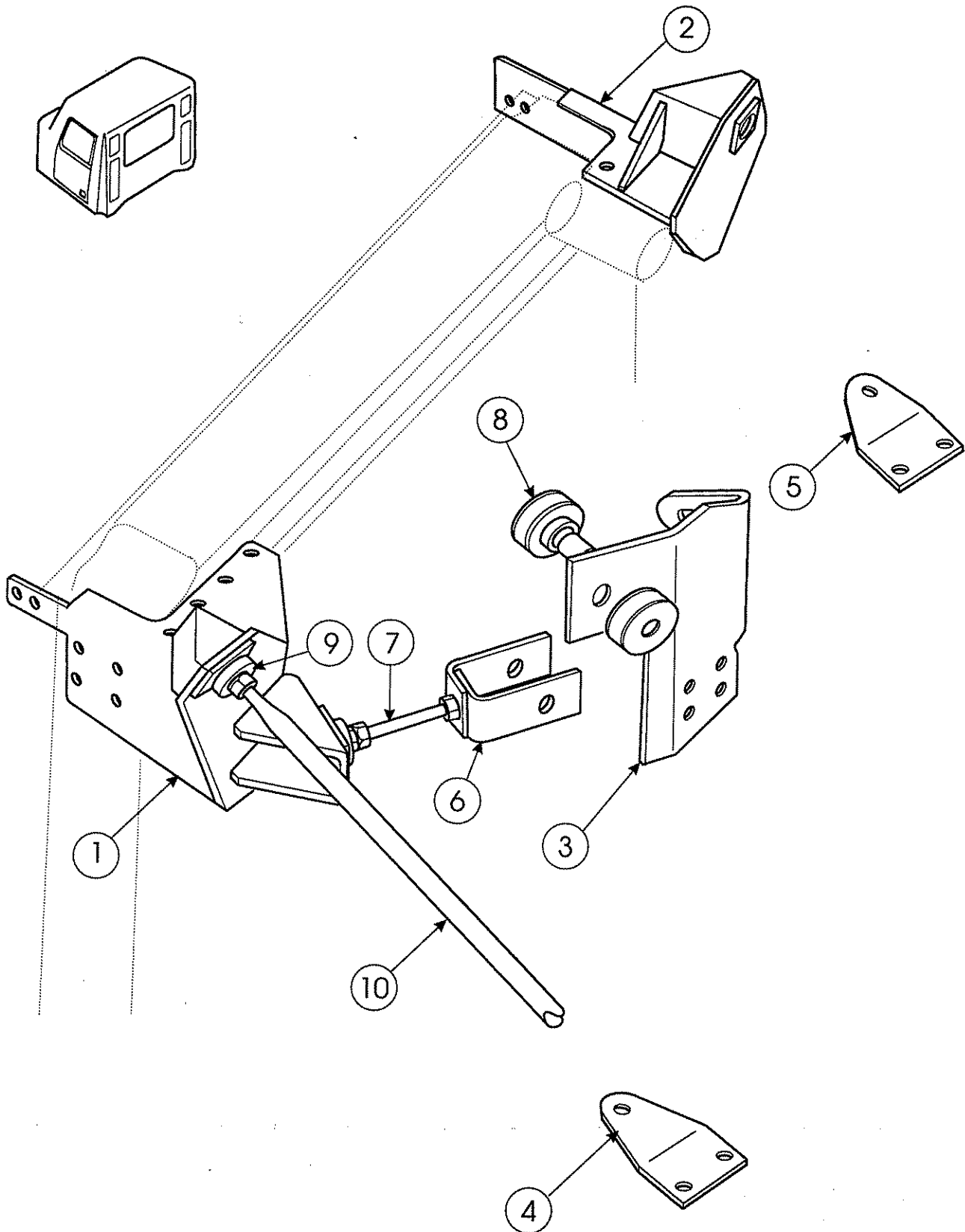
8.7.2

RAD TIE RODS - CAT 3406E - RAD MOUNTED GRILLE

Item	Description	Part Number	Qty
1	Bracket, LH Rad	20203-3573	1
2	Bracket, RH Rad	20203-3572	1
3	Bracket, Engine	20203-3569	1
4	Bracket, Frame LH	20203-3573	1
5	Bracket, Frame RH	20203-3572	1
6	Bracket, Tie Rod	20201-3484	2
7	Rad Tie Rod, Rad to Engine	20201-3489	1
8	Kit, Safetied Sandwich	63390-3411	1
9	Isolator	509860	6
10	Rad Tie Rod 62.5"	20201-3482-62.5	2

Specific BOMs listed: 3059-001-14

COOLING SYSTEM 8



COOLING SYSTEM

RADIATOR TIE RODS - FRAME MOUNTED

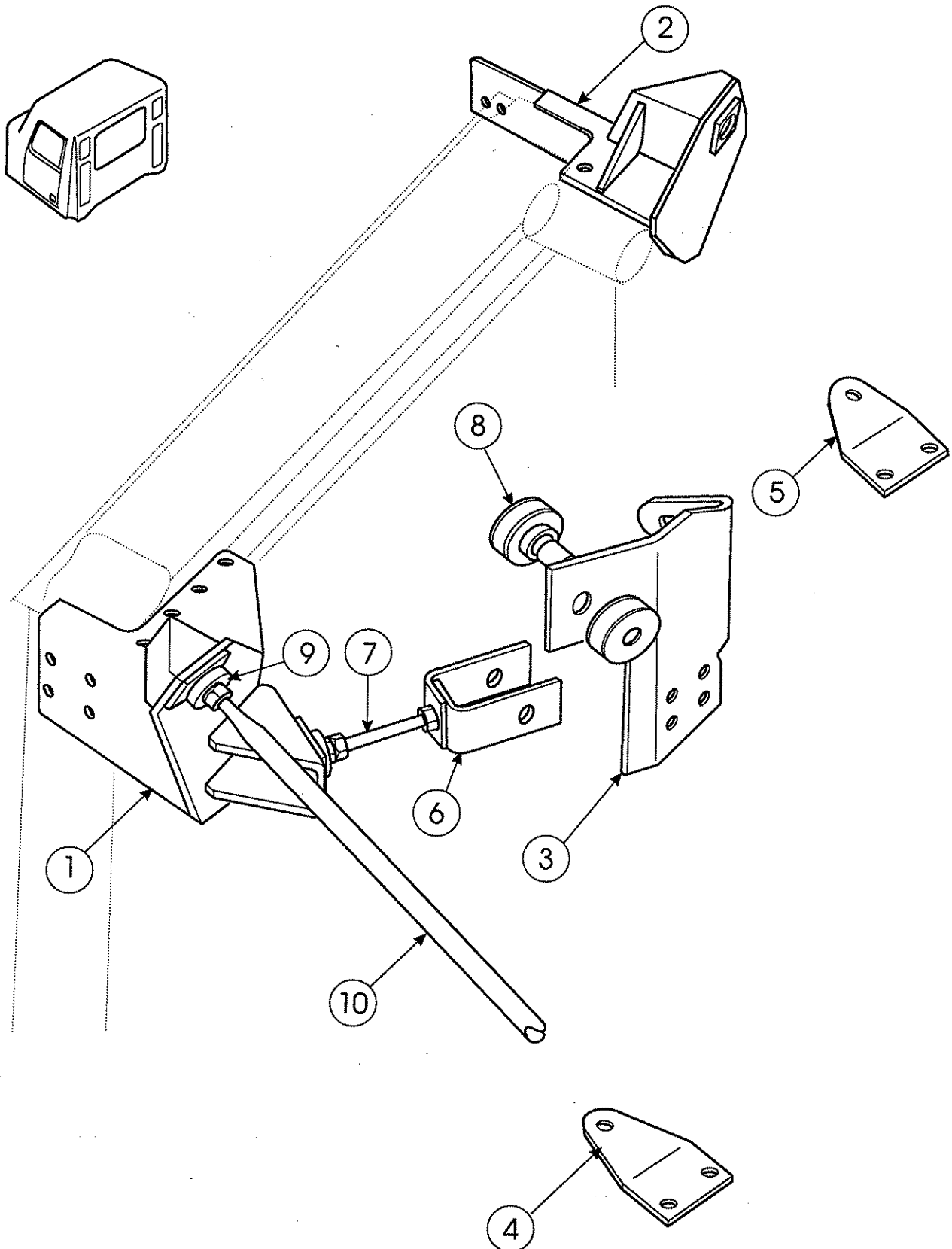
8.7.2

RAD TIE RODS - 49FX, 49SX, N14+ - RAD MOUNTED GRILLE

Item	Description	Part Number	Qty
1	Bracket, LH Rad	20203-3577	1
2	Bracket, RH Rad	20203-3551	1
3	Bracket, Engine	20203-3576	1
4	Bracket, Frame LH	20203-3549	1
5	Bracket, Frame RH	20203-3553	1
6	Bracket, Tie Rod	20201-3484	2
7	Rad Tie Rod, Rad to Engine	20201-3490-9.00	1
8	Kit, Safetied Sandwich	63390-3411	1
9	Isolator	509860	6
10	Rad Tie Rod 62.5"	20201-3482-62.5	2

Specific BOMs listed: 3059-001-15

COOLING SYSTEM 8



COOLING SYSTEM

RADIATOR TIE RODS - FRAME MOUNTED

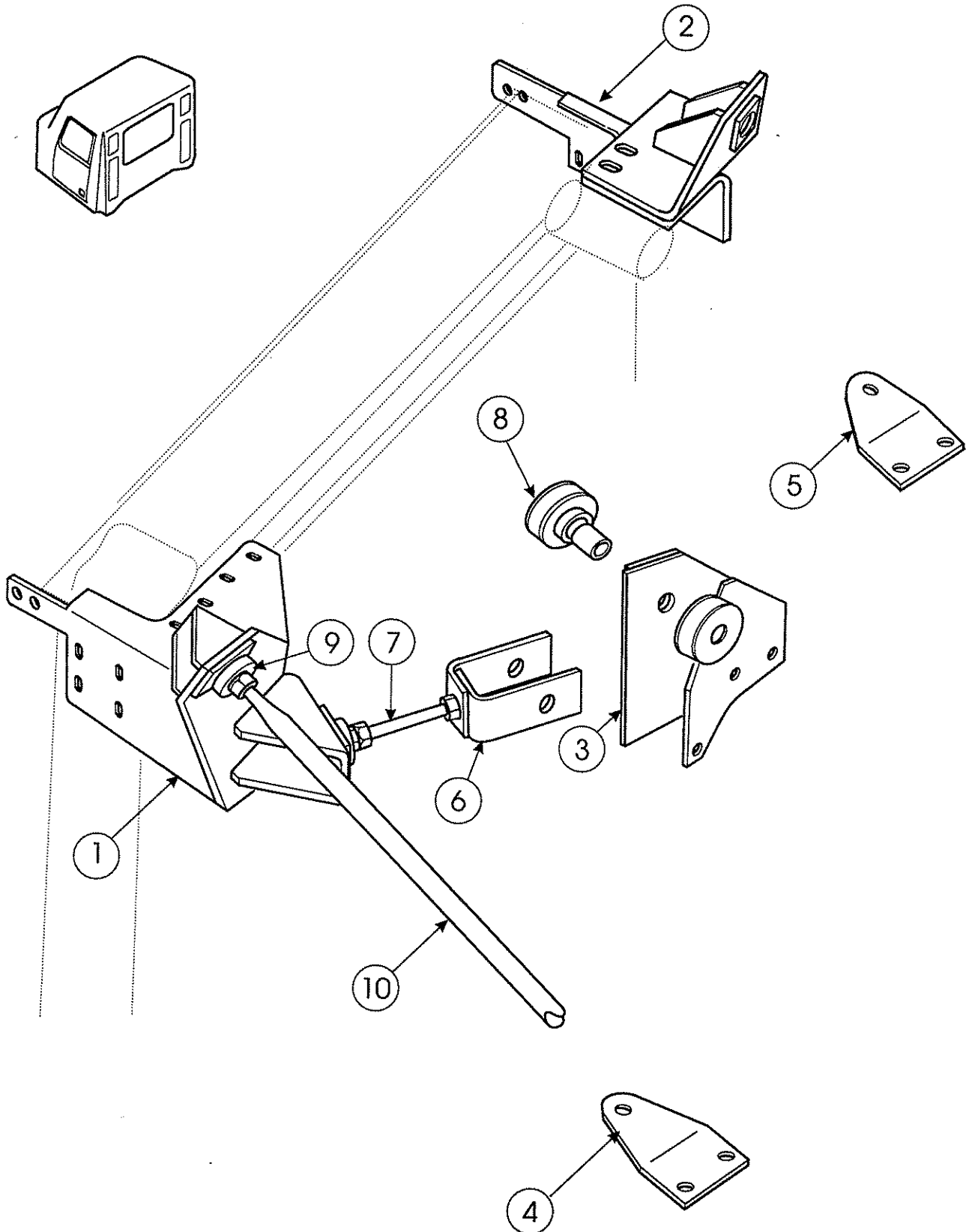
8.7.2

RAD TIE RODS - 49FX, 49SX, N14+ - HOOD MOUNTED GRILLE

Item	Description	Part Number	Qty
1	Bracket, LH Rad	20203-3579	1
2	Bracket, RH Rad	20203-3551	1
3	Bracket, Engine	20203-3576	1
4	Bracket, Frame LH	20203-3549	1
5	Bracket, Frame RH	20203-3553	1
6	Bracket, Tie Rod	20201-3484	2
7	Rad Tie Rod, Rad to Engine	20201-3490-9.00	1
8	Kit, Safetied Sandwich	63390-3411	1
9	Isolator	509860	6
10	Rad Tie Rod 62.5"	20201-3482-62.5	2

Specific BOMs listed: 3059-001-16

COOLING SYSTEM 8



COOLING SYSTEM

RADIATOR TIE RODS - FRAME MOUNTED

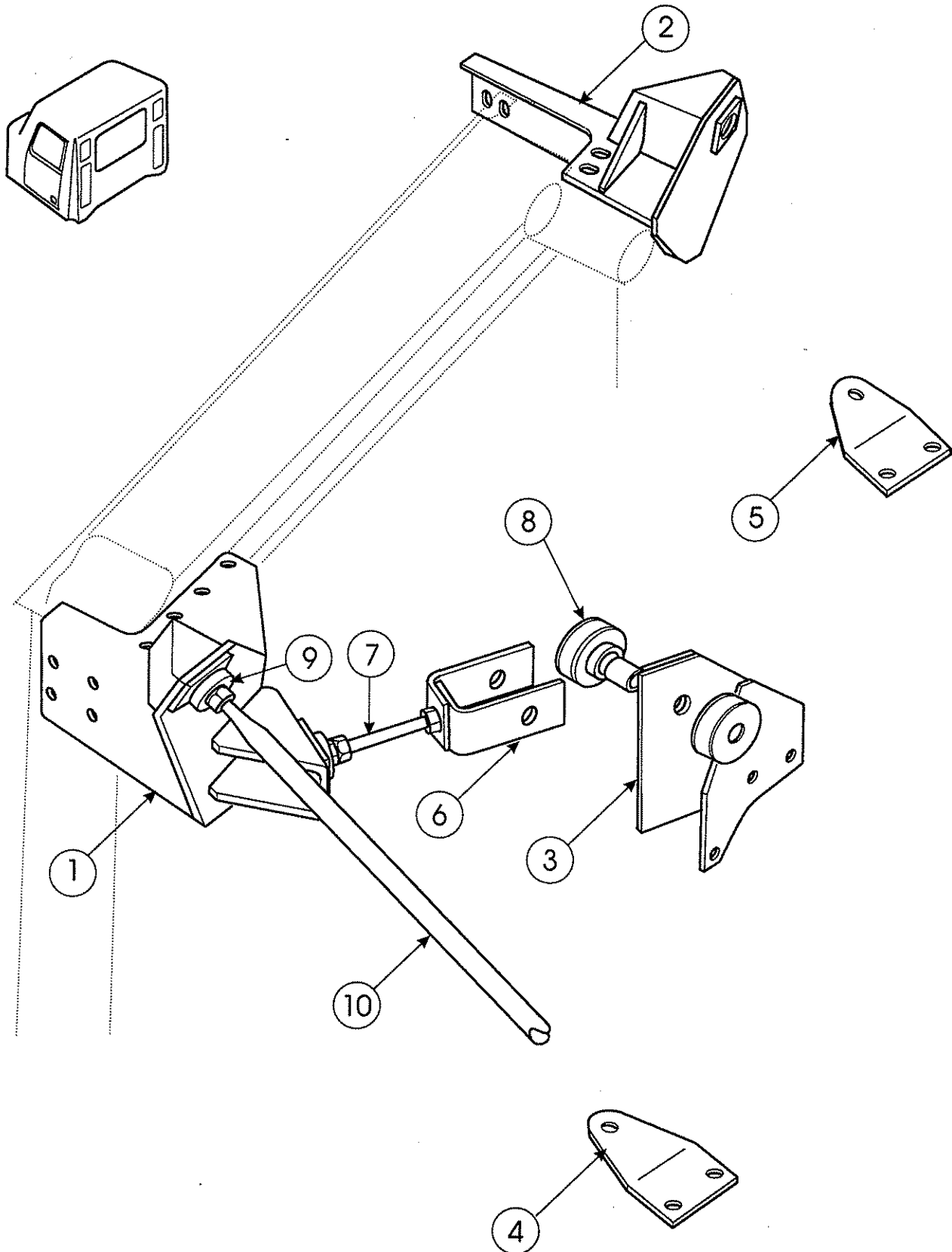
8.7.2

RAD TIE RODS - 49FX, 49SX, SERIES 60 - RAD MOUNTED GRILLE

Item	Description	Part Number	Qty
1	Bracket, LH Rad	20203-3575	1
2	Bracket, RH Rad	20203-3581	1
3	Bracket, Engine	20203-3574	1
4	Bracket, Frame LH	20203-3549	1
5	Bracket, Frame RH	20203-3553	1
6	Bracket, Tie Rod	20201-3484	2
7	Rad Tie Rod, Rad to Engine	20201-3490-6.00	1
8	Kit, Safetied Sandwich	63390-3411	1
9	Isolator	509860	6
10	Rad Tie Rod 62.5"	20201-3482-62.5	2

Specific BOMs listed: 3059-001-17

COOLING SYSTEM 8



COOLING SYSTEM

RADIATOR TIE RODS - FRAME MOUNTED

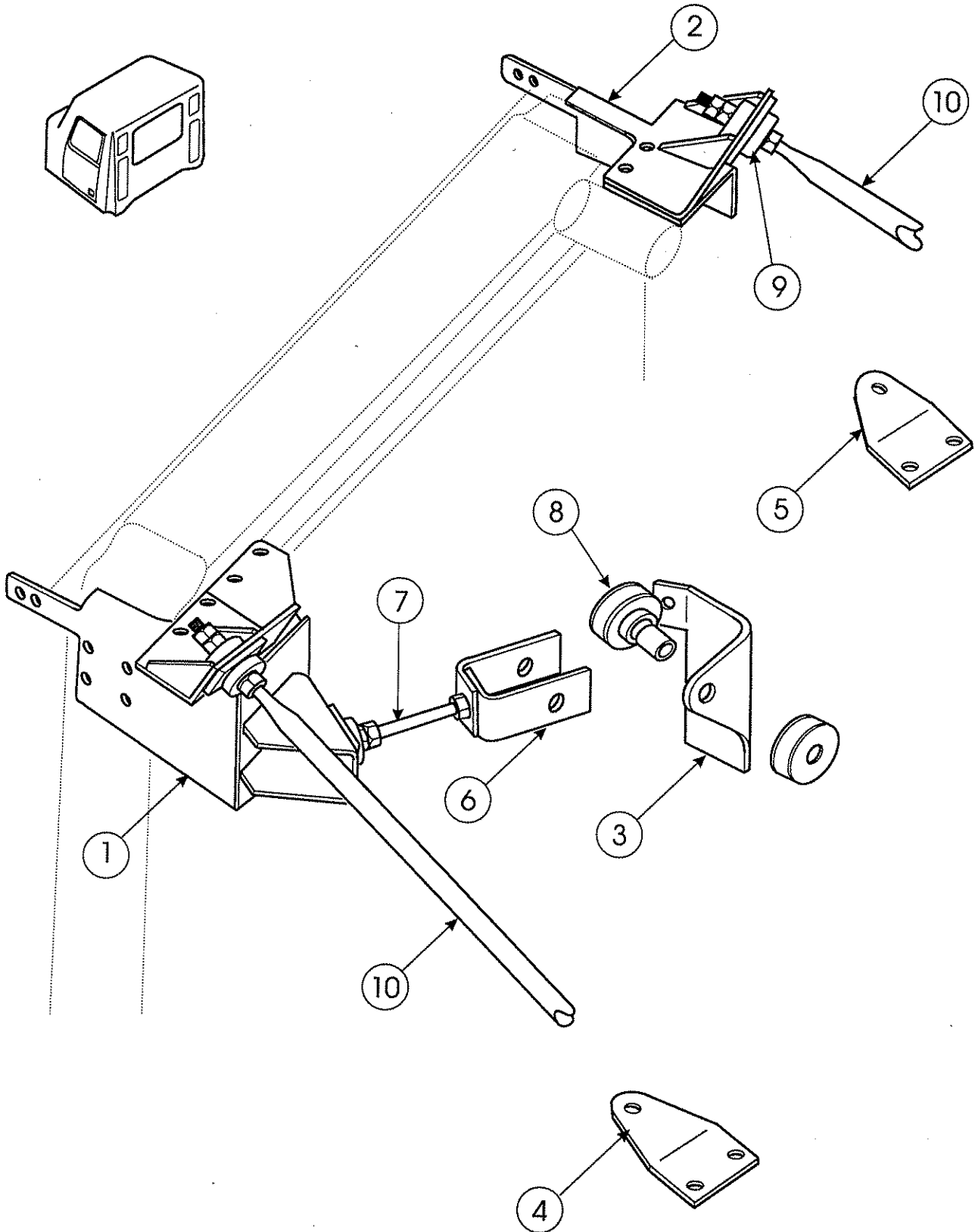
8.7.2

RAD TIE RODS - 49FX, 49SX, SERIES 60 - HOOD MOUNTED GRILLE

Item	Description	Part Number	Qty
1	Bracket, LH Rad	20203-3578	1
2	Bracket, RH Rad	20203-3551	1
3	Bracket, Engine	20203-3574	1
4	Bracket, Frame LH	20203-3549	1
5	Bracket, Frame RH	20203-3553	1
6	Bracket, Tie Rod	20201-3484	2
7	Rad Tie Rod, Rad to Engine	20201-3490-6.00	1
8	Kit, Safetied Sandwich	63390-3411	1
9	Isolator	509860	6
10	Rad Tie Rod 62.5"	20201-3482-62.5	2

Specific BOMs listed: 3059-001-18

COOLING SYSTEM 8



COOLING SYSTEM

RADIATOR TIE RODS - FRAME MOUNTED

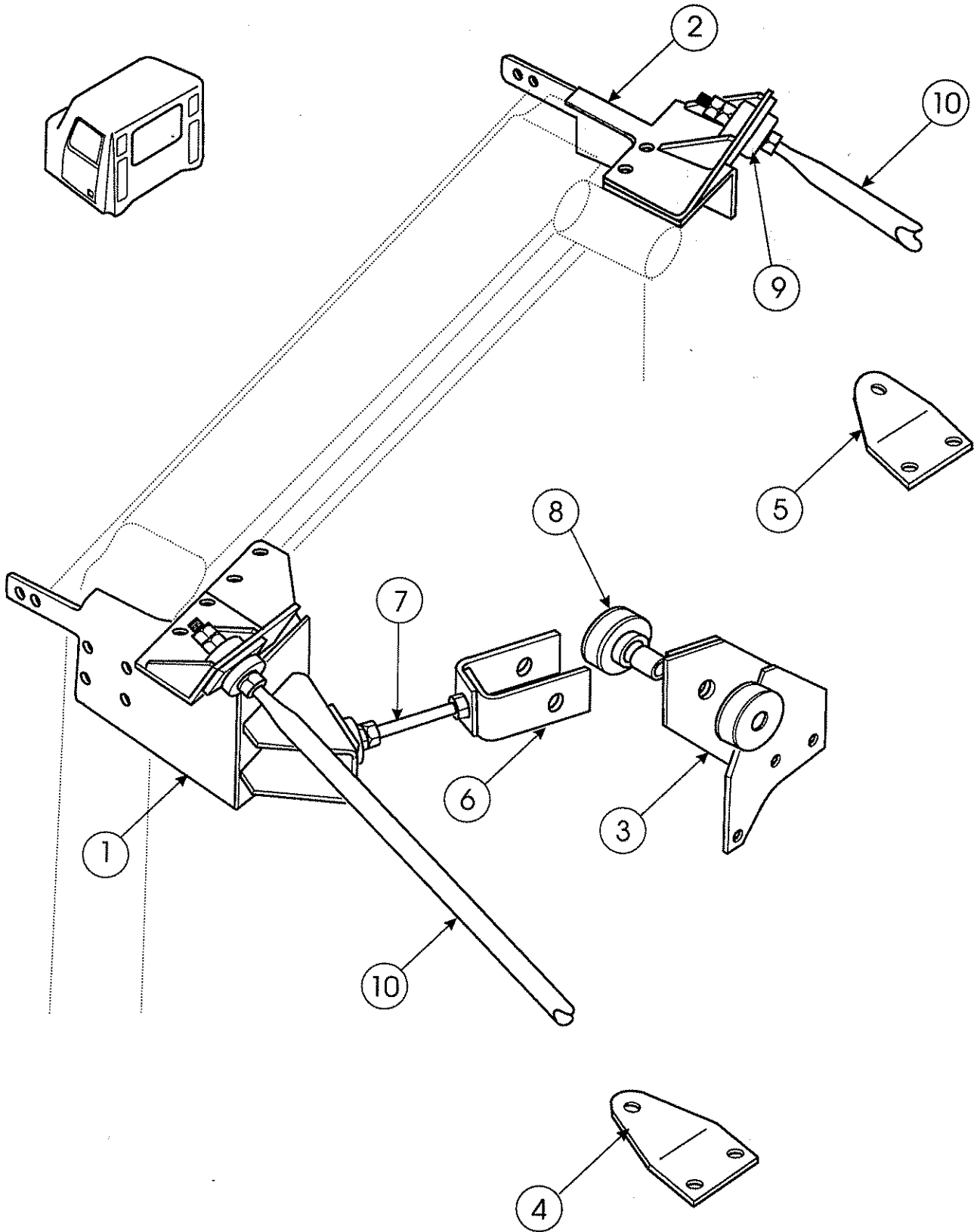
8.7.2

RAD TIE RODS - 49FX, 49SX, CUMMINS N14+ - RAD MOUNTED GRILLE

Item	Description	Part Number	Qty
1	Bracket, LH Rad	20203-3580	1
2	Bracket, RH Rad	20203-3581	1
3	Bracket, Engine	20203-3582	1
4	Bracket, Frame LH	20203-3549	1
5	Bracket, Frame RH	20203-3553	1
6	Bracket, Tie Rod	20201-3484	2
7	Rad Tie Rod, Rad to Engine	20201-3490-9.00	1
8	Kit, Safetied Sandwich	63390-3411	1
9	Isolator	509860	6
10	Rad Tie Rod 65"	20201-3482-65.0	2

Specific BOMs listed: 3059-001-19

COOLING SYSTEM 8



COOLING SYSTEM

RADIATOR TIE RODS - FRAME MOUNTED

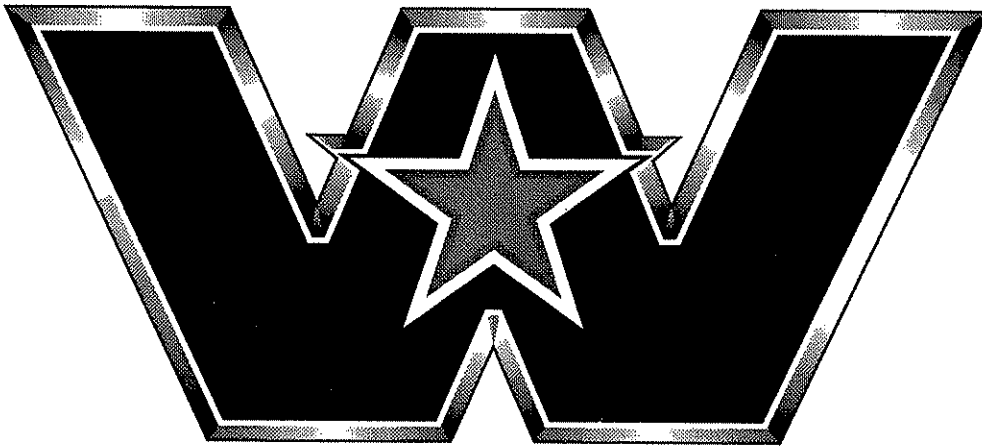
8.7.2

RAD TIE RODS - 49FX, 49SX, SERIES 60 -RAD MOUNTED GRILLE

Item	Description	Part Number	Qty
1	Bracket, LH Rad	20203-3580	1
2	Bracket, RH Rad	20203-3581	1
3	Bracket, Engine	20203-3584	1
4	Bracket, Frame LH	20203-3549	1
5	Bracket, Frame RH	20203-3553	1
6	Bracket, Tie Rod	20201-3484	2
7	Rad Tie Rod, Rad to Engine	20201-3490-6.00	1
8	Kit, Safetied Sandwich	63390-3411	1
9	Isolator	509860	6
10	Rad Tie Rod 65"	20201-3482-65.0	2

Specific BOMs listed: 3059-001-20

COOLING SYSTEM 8



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