

Parts Manual



See "General Information"
for New Parts Manual
Features.

3512C Marine Engine

E3W1-Up (Engine)

This Parts Manual is also available in .PDF Format on Compact Disc
(CD-ROM) - Caterpillar Form No. SERP4669

Product and Dealer Information

Note: For product identification plate locations, see the section "Product Identification Information" in the Operation and Maintenance Manual.

Delivery Date: _____

Product Information

Model: _____

Product Identification Number: _____

Engine Serial Number: _____

Transmission Serial Number: _____

Generator Serial Number: _____

Attachment Serial Numbers: _____

Attachment Information: _____

Customer Equipment Number: _____

Dealer Equipment Number: _____

Dealer Information

Name: _____ Branch: _____

Address: _____

Dealer Contact

Phone Number

Hours

Sales: _____

Parts: _____

Service: _____

MEMORANDA

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GENERAL INFORMATION

1. ENGINE IDENTIFICATION

Caterpillar engines are identified with Serial Numbers and Arrangement Numbers. In some cases, Modification Numbers are also used. The serial number plate which shows these numbers is mounted on the engine.

Caterpillar dealers need this information to determine which components were included on the engine when it was assembled at the factory. This permits accurate identification of replacement part numbers.

2. ORDERING PARTS

WARNING

When replacement parts are required for this product Caterpillar recommends using Caterpillar replacement parts or parts with equivalent specifications including, but not limited to, physical dimensions, type, strength and material.

Failure to heed this warning can lead to premature failures, product damage, personal injury or death.

Quality Caterpillar replacement parts are available from Caterpillar dealers throughout the world. Their parts inventories are up to date and include all parts normally required to protect your investment in Caterpillar Engines. Dealers may offer repair kits or remanufactured parts to allow selection of the most effective repair alternative for a particular situation. When ordering parts, your order should specify the quantity, part number, part name, and the serial number/product identification number of the engine for which the parts are needed.

3. PARTS MANUAL ORGANIZATION

Product information in this manual is presented as "information elements" that represent all of the components for the specific model. An Engine Arrangement is an example of an information element. The information elements are organized alphabetically by part name and secondarily by part number within each major section of the manual.

4. TABLE OF CONTENTS

A table of contents (TOC) is found at the beginning of the manual. The TOC lists each section of the manual with a complete list of all information elements organized as they appear in the manual. Page numbers are provided for quick reference to detailed parts identification illustrations and serviceable consist lists.

5. MAINTENANCE PARTS INDEX

The Maintenance Parts Index, located near the beginning of the manual, references most frequently used maintenance part numbers, providing description, quantity, usage and page number. This information is organized alphabetically by part description.

6. INDEX

The index located near the front of the manual is an alphabetical listing of all information elements included in the manual. Page numbers are provided for quick reference to detailed parts identification illustrations and serviceable consist lists.

7. PART NUMBER INDEX

A numerical index listing all part numbers and the corresponding page number(s) appears at the back of the manual.

8. CAPTIONS

Captions located at the beginning each information element identify the part number and part name along with additional descriptive information. S/N information found in each caption should be used to select correct information for a specific engine. Field replacement options, identification of optional attachment components, and where used ("part of") information is also provided.

The first line of a caption is shown in larger type font to indicate the beginning of an information element. Captions for additional pages that may be required to illustrate an information element will be shown in standard type font and will include the term (*contd.*) .

9. NON-SERVICED PARTS

In some instances it is necessary to display non-serviced parts that are a link to lower level serviceable consist lists. These non-serviced part numbers are shown in *italic* type indicating that they are not available. All consist lists have not been converted to reflect this enhancement.

GENERAL INFORMATION

10. PARTS LIST REFERENCE NUMBERS

Numbers shown in the Ref No column correspond to numbers used in the associated graphic(s). An alphabetic suffix may be added to a reference number to identify lower level consist items. Numbers shown in the Graphic Ref column refer to the graphic number identifier displayed in the lower left corner of each illustration. The Graphic Ref number may be used in combination with the item Ref No to determine the correct part number. There may be intentional omission of a Ref No in a consist list as information is updated to reflect the latest serviceable part numbers.

11. INDENTED PART NAMES

When a part name is indented in a parts list, it is part of (included in) the group or assembly under which it is indented.

12. ILLUSTRATION REFERENCE LETTERS

When necessary, illustrations contain reference letters (A, B, C etc.) that are intended to track lines and harnesses from one point to another. They are also used to show where to reconnect illustrations that have been separated.

13. ABBREVIATIONS AND SYMBOLS

O.D. – Outside Diameter
I.D. – Inside Diameter
A – Not Part Of This Group
B – Use As Required
C – Change From Previous Type
D – Order By The Meter
E – Order By The Centimeter
F – Not Shown
G – Order By The Inch
I – Refer To Hydraulic Information System
M – Metric Part
R – Remfg Part May Be Available
Y – Separate Illustration
Z – Not Serviced Separately

 *New Feature*

14. DESCRIPTION OF TYPE CHANGES

Type - A type is defined as any configuration change that requires an additional Information Element for an Arrangement, Group, or Assembly. If serial number breaks for types are not available, a type # (Type 1, Type 2, etc.) will be displayed in the caption. These "type" changes are identified with a "C" note (change from previous type) in the Parts List. Only the "types" that apply to this Parts Manual will be included. Additional types may exist causing "C" notes to appear on an Information Element when no other types are shown.

15. <END>

This symbol indicates the end of an information element.

NOTE:

Continuing improvement and advancement of product design may cause changes to your engine which may not be included in this publication. Whenever a question arises regarding your Caterpillar product or this publication, please consult your Caterpillar dealer for the latest available information.

REPAIR ALTERNATIVES

REFURBISHED ELECTRONIC COMPONENTS

As an option when making repairs consider Caterpillar Refurbished Electronic Components. Components that are available through the Caterpillar Remanufactured Program are identified three ways in the parts book:

- with the letter R in the note field of the parts list
- with an R* at the beginning of the first line of the caption
- with an *R at the end of the first line of the caption

Typical components included in the Remanufacturing Program include:

REFURBISHED ELECTRONIC CONTROL
MODULES
REFURBISHED ELECTRONIC SENSORS

SUPPLEMENTAL COOLANT ADDITIVES

CUSTOMER BENEFITS:

Protects against cavitation, foam, erosion, corrosion, and scale buildup in cooling systems.

- Provides measured coolant conditioner.

DESCRIPTION:

Additives deplete from the coolant with normal operation. For this reason, Supplemental Coolant Additives (SCA) must be added to all heavy duty coolants at regular intervals. In addition, when not using a fully formulated, pre-charged antifreeze, like Caterpillar's DEAC, an initial charge of SCA must be added to the cooling system. The amount of SCA added to the system is dependent on the capacity of the system.

The SCA for initial fill is provided as a liquid. SCA's for maintenance intervals are available in liquid form and as a spin-on element. (No Spin-on available for 3600 Family of Engines)

NOTE:

The amount of SCA added at initial fill is not the same as the amount added at maintenance intervals.

The coolant additive elements can be used with any ethylene or propylene glycol type antifreeze which meets ASTM D4985 or ASTM D5345 Specifications.

NOTE:

For use with standard heavy duty coolant only, not for use with Extended Life Coolant.

PARTS NEEDED:

Cooling System Capacity		Liquid SCA at Initial Fill	Liquid SCA at Maintenance*	Spin-on SCA Maintenance Element*
Liters	Gallons			
22-30	(6-8)	3P-2044 (1)	6V-3542 (1)	111-2370 (1)
30-38	(8-10)	3P-2044 (1) 6V-3542 (1)	111-2372 (1)	111-2369 (1)
38-49	(10-13)	3P-2044 (1) 8T-1589 (1)	111-2372 (1)	111-2369 (1)
49-64	(13-17)	3P-2044 (2)	8T-1589 (1)	9N-3368 (1)
64-83	(17-22)	3P-2044 (2) 8T-1589 (1)	111-2372 (1) 6V-3542 (1)	111-2371 (1)
83-114	(22-30)	3P-2044 (3) 8T-1589 (1)	3P-2044 (1)	9N-3718 (1)
114-163	(30-43)	3P-2044 (5)	3P-2044 (1) 6V-3542 (1)	111-2371 (2)
163-242	(43-64)	3P-2044 (8)	3P-2044 (2)	9N-3718 (2)

* Normal maintenance period is 250 hrs. See your Operation and Maintenance Manual for complete coolant maintenance instructions.

() Indicates quantity required.

MAINTENANCE PARTS

DESCRIPTION	PART NUMBER	QTY	WHERE USED	PAGE
AIR INLET AND EXHAUST SYSTEM				
FILTER ELEMENT AS-AIR (PRIMARY)	226-2779	1	AIR CLEANER GP	185
		1	AIR CLEANER GP	186
BASIC ENGINE				
BELT-SERPENTINE (ALTERNATOR)	141-7116	1	MOUNTING GP-ALTERNATOR	54
PLUG-OIL DRAIN (ENGINE OIL PAN)	4B-2363	2	PAN GP-OIL	61
		2	PAN GP-OIL	63
SCREEN AS-SUCTION (ENGINE OIL PAN)	1W-1564	1	PAN GP-OIL	61
		1	PAN GP-OIL	63
SEAL-VALVE COVER	272-0760	1	COVER GP-VALVE MECHANISM	14
		1	COVER GP-VALVE MECHANISM	15
COOLING SYSTEM				
CAP-PRESSURE (14-PSI) (COOLANT TANK)	127-8660	1	TANK GP-COOLANT	173
CAP-PRESSURE (14-PSI) (EXPANSION TANK)	127-8660	1	TANK GP-EXPANSION	174
		1	TANK GP-EXPANSION	176
CAP-PRESSURE (7-PSI) (COOLANT TANK)	4N-3311	1	TANK GP-COOLANT	173
		1	TANK GP-EXPANSION	174
CAP-PRESSURE (7-PSI) (EXPANSION TANK)	4N-3311	1	TANK GP-EXPANSION	176
		1	TANK GP-EXPANSION	174
KIT-RADIATOR CAP (COOLANT TANK)	294-9052	1	TANK GP-COOLANT	173
	295-5458	1	TANK GP-COOLANT	173
KIT-RADIATOR CAP (EXPANSION TANK)	294-9052	1	TANK GP-EXPANSION	174
	295-5458	1	TANK GP-EXPANSION	174
PLUG-DRAIN (AUXILIARY SEA WATER PUMP)	3F-1357	1	PUMP GP-AUXILIARY SEA WATER	162
	3F-1358	1	PUMP GP-AUXILIARY SEA WATER	164
PLUG-DRAIN (OIL COOLER)	9M-4202	1	LINES GP-WATER	141
REGULATOR-WATER TEMPERATURE (30-DEG C)	219-3240	2	VALVE GP-THERMOSTATIC	180
REGULATOR-WATER TEMPERATURE (92-DEG C)	6I-4950	4	HOUSING & REGULATOR GP	138
ROD-ZINC (AUXILIARY SEA WATER PUMP)	6L-2280	1	PUMP GP-AUXILIARY SEA WATER	155
		1	PUMP GP-AUXILIARY SEA WATER	162
ROD-ZINC (HEAT EXCHANGER)	116-7011	2	LINES GP-WATER	148
SEAL-LIP TYPE (WATER TEMPERATURE REGULATOR)	3S-9643	4	HOUSING & REGULATOR GP	138
		2	VALVE GP-THERMOSTATIC	180

MAINTENANCE PARTS

DESCRIPTION	PART NUMBER	QTY	WHERE USED	PAGE
ELECTRICAL AND STARTING SYSTEM				
BATTERY (12-VOLT)	9X-9720	2	BATTERY GP	264
BATTERY GP (12-VOLT)	9X-9730	2	BATTERY GP	265
BREATHER (ATMOSPHERIC AIR)	9G-5127	1	WIRING GP-ENGINE	384
CIRCUIT BREAKER AS (20-AMPERE, DOUBLE POLE)	231-9866	3	BOX GP-JUNCTION	270
CIRCUIT BREAKER AS (40-AMPERE, DOUBLE POLE)	231-9864	1	BOX GP-JUNCTION	270
CIRCUIT BREAKER AS (70-AMPERE, DOUBLE POLE)	231-9863	1	BOX GP-JUNCTION	270
SCREEN-STRAINER (PRESSURE REDUCING VALVE)	252-9298	1	VALVE GP-PRESSURE REDUCING	377
FUEL SYSTEM				
FILTER ELEMENT-FUEL (ADVANCED EFFICIENCY)	1R-0756	7	FILTER GP-FUEL	232
FILTER ELEMENT-FUEL (HIGH EFFICIENCY)	1R-0756	5	FILTER GP-FUEL	228
		5	FILTER GP-FUEL	230
FILTER ELEMENT-FUEL (PRIMARY)	9M-2342	1	FILTER GP-PRIMARY FUEL	234
GASKET (FUEL FILTER)	9Y-8389	1	FILTER GP-FUEL	228
		1	FILTER GP-FUEL	230
		1	FILTER GP-FUEL	232
GASKET (FUEL PRIMING PUMP)	9Y-8389	1	PUMP GP-FUEL PRIMING	244
LUBRICATION SYSTEM				
BREATHER AS (CHROME) (CRANKCASE)	126-0577	1	BREATHER GP	85
BREATHER AS (CRANKCASE)	4W-3027	4	BREATHER GP	86
CAP AS-ENGINE OIL FILLER	128-5988	1	FILLER GP-ENGINE OIL	89
	262-6104	1	FILLER GP-ENGINE OIL	88
FILTER ELEMENT AS-ENGINE OIL	1R-0726	3	FILTER GP-ENGINE OIL	91
		4	FILTER GP-ENGINE OIL	93
		3	FILTER GP-ENGINE OIL	98
SCREEN AS-SUCTION (ENGINE OIL)	7C-4716	1	CONNECTION GP-OIL	87
SEAL-VALVE COVER	272-0760	1	BREATHER GP	85
		4	BREATHER GP	86
		1	FILLER GP-ENGINE OIL	88
		1	FILLER GP-ENGINE OIL	89
STRAINER AS (ENGINE OIL)	2G-6304	1	PUMP & LINES GP-PRELUBRICATION	115
OPERATOR STATION				
LAMP AS (24-VOLT, AMBER)	308-9781	1	PANEL GP-PILOT HOUSE INSTR	420
		1	PANEL GP-PILOT HOUSE INSTR	422
LAMP AS (24-VOLT, GREEN)	308-9783	1	PANEL GP-PILOT HOUSE INSTR	420
		1	PANEL GP-PILOT HOUSE INSTR	422
LAMP-LED (24-VOLT, AMBER)	125-9956	1	BOX GP-INSTRUMENT PANEL	406
		1	BOX GP-INSTRUMENT PANEL	409
LAMP-LED (24-VOLT, GREEN)	125-9957	1	BOX GP-INSTRUMENT PANEL	406
		1	BOX GP-INSTRUMENT PANEL	409
LAMP-LED (24-VOLT, RED)	125-9955	1	BOX GP-INSTRUMENT PANEL	406
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