



Operation and Maintenance Manual

415F2 Industrial Loader

PF4 1-UP (415F2 IL)

Language: Original Instructions



Scan to find and purchase genuine Cat® parts and related service information.



Important Safety Information

Most accidents that involve product operation, maintenance and repair are caused by failure to observe basic safety rules or precautions. An accident can often be avoided by recognizing potentially hazardous situations before an accident occurs. A person must be alert to potential hazards, including human factors that can affect safety. This person should also have the necessary training, skills and tools to perform these functions properly.

Improper operation, lubrication, maintenance or repair of this product can be dangerous and could result in injury or death.

Do not operate or perform any lubrication, maintenance or repair on this product, until you verify that you are authorized to perform this work, and have read and understood the operation, lubrication, maintenance and repair information.

Safety precautions and warnings are provided in this manual and on the product. If these hazard warnings are not heeded, bodily injury or death could occur to you or to other persons.

The hazards are identified by the "Safety Alert Symbol" and followed by a "Signal Word" such as "DANGER", "WARNING" or "CAUTION". The Safety Alert "WARNING" label is shown below.



The meaning of this safety alert symbol is as follows:

Attention! Become Alert! Your Safety is Involved.

The message that appears under the warning explains the hazard and can be either written or pictorially presented.

A non-exhaustive list of operations that may cause product damage are identified by "NOTICE" labels on the product and in this publication.

Caterpillar cannot anticipate every possible circumstance that might involve a potential hazard. The warnings in this publication and on the product are, therefore, not all inclusive. You must not use this product in any manner different from that considered by this manual without first satisfying yourself that you have considered all safety rules and precautions applicable to the operation of the product in the location of use, including site-specific rules and precautions applicable to the worksite. If a tool, procedure, work method or operating technique that is not specifically recommended by Caterpillar is used, you must satisfy yourself that it is safe for you and for others. You should also ensure that you are authorized to perform this work, and that the product will not be damaged or become unsafe by the operation, lubrication, maintenance or repair procedures that you intend to use.

The information, specifications, and illustrations in this publication are on the basis of information that was available at the time that the publication was written. The specifications, torques, pressures, measurements, adjustments, illustrations, and other items can change at any time. These changes can affect the service that is given to the product. Obtain the complete and most current information before you start any job. Cat dealers have the most current information available.

NOTICE

When replacement parts are required for this product Caterpillar recommends using original Caterpillar® replacement parts.

Other parts may not meet certain original equipment specifications.

When replacement parts are installed, the machine owner/user should ensure that the machine remains in compliance with all applicable requirements.

In the United States, the maintenance, replacement, or repair of the emission control devices and systems may be performed by any repair establishment or individual of the owner's choosing.

Table of Contents

Foreword	4	Operator Station	38
Safety Section		Product Information Section	
Safety Messages	6	General Information	39
Additional Messages	14	Identification Information	43
General Hazard Information	17	Operation Section	
Crushing Prevention and Cutting Prevention..	21	Before Operation	48
Burn Prevention	21	Machine Operation	50
Fire Prevention and Explosion Prevention	22	Controls	76
Fire Safety	25	Engine Starting	79
Fire Extinguisher Location	26	Parking	82
Tire Information	27	Transportation Information	85
Electrical Storm Injury Prevention	28	Towing Information	87
Before Starting Engine	28	Engine Starting (Alternate Methods)	89
Engine Starting	28	Maintenance Section	
Visibility Information	28	Tire Inflation Information	91
Restricted Visibility	29	Lubricant Viscosities and Refill Capacities	92
Before Operation	29	Maintenance Support	99
Operation	29	Maintenance Interval Schedule	102
Engine Stopping	33	Warranty Section	
High Pressure Fuel Lines	33	Warranty Information	158
Work Tools	35	Reference Information Section	
Parking	35	Reference Materials	159
Slope Operation	35	Index Section	
Equipment Lowering with Engine Stopped	36	Index	162
Sound Information and Vibration Information .	36		