

Massey Ferguson®

9545 / 9565 Rotary Combine

SERVICE MANUAL 4283564M2

01 - General Information

Contents

SAFETY

Safety Alert Symbol	01-1
Safety Messages	01-1
Informational Messages	01-1
A Word To The Operator	01-2
Fire Prevention and First Aid	01-3
Prepare for Operation	01-3
Operation	01-4
Transporting Combine On Public Roads	01-7
Maintenance	01-8
Engine Safety	01-10
Tire Safety	01-10
Battery Safety	01-11
Diesel Exhaust Fluid Safety	01-11
Accumulator Safety	01-12
Safety Equipment	01-12
Hazard Lamps	01-12
Beacon Lamps	01-12
Backup Alarm	01-13
Parking Brake	01-13
Fire Extinguisher	01-13
Header Lift Cylinder Stop	01-13
Wheel Chocks	01-14
Shields and Latches	01-14
Feeder House Shields	01-14
Left-hand Side Shield	01-16
Right-hand Side Shields	01-17
Mud Shields	01-18
Cleaning Fan Drive Shield	01-18
Rear Shield	01-19

GENERAL INFORMATION

Machine Main Components	01-21
How A Combine Works	01-22
Cutting and Feeding	01-22
Threshing and Separating	01-22
Cleaning	01-23
Headers	01-23
Disposal	01-23
Disposal of Waste	01-23
Disposal of Machine	01-23
Intended Use	01-23
Combine Serial Numbers	01-24

Contents

Machine Serial Number	01-24
Engine Serial Number	01-24
Transmission Serial Number	01-24
Final Drive Serial Number	01-25
Serial Number Definition	01-25
Lubrication and Maintenance	01-26
Lubricants	01-26
Service Procedures	01-26
Service Periods	01-26
Lubricating and Maintaining the Combine	01-26
Lubrication and Maintenance Charts	01-27
New Machine	01-27
Every 10 Hours or Daily	01-27
Every 50 Hours or Weekly	01-28
Every 100 Hours or Monthly	01-29
Every 250 Hours	01-30
Every 500 Hours	01-31
Every 1000 hours	01-31
Every 1200 Hours	01-32
Lubrication Fitting Location	01-33
Left-hand Side	01-33
Right-hand side	01-38
Auto Lube	01-46
Auto Lube Intervals	01-47
Auto Lube Diagnosis	01-49
Roller Chains	01-50
Elevator Chains	01-50
Replacing Paddles	01-50
Engine Oil	01-51
Type of Engine Oil	01-51
Viscosity	01-51
Recommended Oil Change Period	01-51
Oil Additives	01-51
Checking Oil Level	01-52
Changing Engine Oil and Filters	01-52
Fuel Filter	01-54
Fuel Filter and Fuel/Water Separator Filter Replacement	01-55
Selective Catalytic Reduction System	01-57
Diesel Exhaust Fluid Filter	01-58
Draining the DEF storage tank and Metering Module	01-59
Engine Air Cleaner	01-59
Outer Filter Element	01-60
Inner Filter Element	01-61
Engine Coolant	01-62
Anti-Freeze Type	01-62
Coolant Change Period	01-62
Coolant Level	01-62
Radiator	01-62
Draining the Engine Cooling System	01-63
Filling the Engine Cooling System	01-63
Cooling Package	01-63
Windshield Washer Reservoir	01-65
Cleaning Cab Glass	01-65
Windshield	01-65
Rear Cab Window	01-65
Climate Control System	01-65
Condenser	01-66
Cab Filters	01-67
Electrical System	01-69
Batteries	01-69
Cleaning Alternator Screen	01-74
Hydraulic System	01-75
Checking the Fluid Level	01-75

Contents

Changing Hydraulic Oil	01-75
Transmission	01-77
Checking and Changing Lubricant	01-77
Final Drive	01-78
Brakes	01-78
Master Cylinder Oil Reservoir	01-78
Bleeding Brake System	01-79
Gearboxes	01-80
Rotor Drive Gearbox	01-80
Right Angle Gearbox	01-81
Unloader Drive Gearbox	01-82
Unloading Auger Shear Bolt	01-83
Shear Bolt Replacement	01-84
Straw Chopper	01-85
Knives	01-85
Jacking Points	01-87
Tires and Wheels	01-89
Tire Pressure	01-89
Dual Tires	01-89
Maintenance of Tires	01-89
Removing Wheel from Combine	01-90
Wheel Installation	01-91
Storage Preparation	01-92
Combine	01-92
Engine	01-92
Preparation For Use After Storage	01-92
Combine	01-92
Engine	01-92
Speed of Components	01-93
Left-hand Drives	01-93
Right-hand Drives	01-95
Rear Drives	01-96
Drive Belts	01-97
Sheave Alignment	01-97
Idler Alignment	01-97
Banded Drive Belt	01-99
Maintenance of Belts	01-100
Belt Changing Guides	01-101
Belt Sheave Alignment	01-103
Belt Run In Procedure	01-103
Belt Troubleshooting	01-104
Belt Problem and Wear Guide	01-104
Roller Chains	01-118
Inspection of Drive Chains and Sprockets	01-118
Drive Chain Adjustment and Tightening	01-119
Drive Chain Sprocket and Idler Alignment	01-120
Drive Chain Elongation and Sprocket Wear	01-121
Normal Tooth Wear	01-122
Not Normal Tooth Wear	01-122
Worn Chain on New Sprockets	01-122
Drive Chain Service Tips	01-123
Chain Replacement	01-124
Cleaning and Lubricating Chains	01-125
Drive Chain Lubrication	01-126
Drive Chain Lubricants	01-126
Good Drive Chain Lubrication	01-127
Roller Chain Drive Troubleshooting Guide	01-128
Torque Charts	01-131
Standard Torque Specifications	01-131
Metric Capscrew Markings and Torque Values	01-132
Metric Conversions	01-133
Fractions, Decimals, and Millimeters Conversion Chart	01-134
Decimal Equivalents of 8ths, 16ths, 32nds, and 64ths	01-139

Contents

Decimal Equivalents Of Letter Size Drills	01-140
Decimal Equivalents of Number Size Drills	01-141
Tap Drill Sizes - S.A.E. & Metric	01-143
American Standard Pipe Thread and Tap Drill Sizes	01-147
Electrical Formulas	01-148
Amperes (Current Flow)	01-148
Volts (Electromotive Force)	01-148
Ohms (Resistance)	01-148
Watts	01-148
Horsepower	01-148
Belt Speed Calculation Formulas	01-148
Geometrical Formulas	01-149
Circumference of a Circle	01-149
Area of a Circle	01-149
Volume of a Cylinder	01-149
Volume of a Sphere	01-149
Area of a Triangle	01-149
Metric to Imperial and Imperial to Metric Conversion Factors	01-150
Measures of Temperature	01-150
Measures of Power	01-150
Measures of Pressure	01-150
Measures of Length	01-151
Measures of Area	01-152
Measures of Volume (Dry)	01-153
Measures of Volume (Liquid)	01-154
Measures of Mass (Weight)	01-155
Measures of Effort (Torque)	01-156
Reference Tables	01-157
INDEX	01-159

SAFETY

SAFETY ALERT SYMBOL

FIG. 1: The safety alert symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

Look for the safety alert symbol both in this manual and on safety signs on the machine. The safety alert symbol will direct you to information that includes your safety and the safety of others.

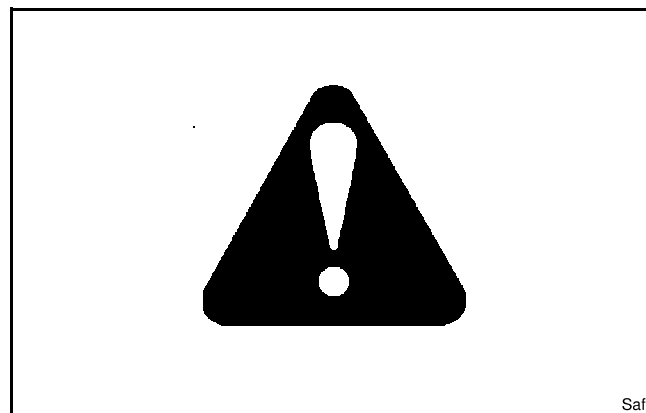


FIG. 1

SAFETY MESSAGES

FIG. 2: The words DANGER, WARNING, or CAUTION are used with the safety alert symbol. Learn to recognize these safety alerts and follow the recommended precautions and safety practices.



DANGER: Indicates an imminently hazardous situation that, if not avoided, will result in DEATH OR VERY SERIOUS INJURY.



WARNING: Indicates a potentially hazardous situation that, if not avoided, can result in DEATH OR SERIOUS INJURY.



CAUTION: Indicates a potentially hazardous situation that, if not avoided, can result in MINOR INJURY.



FIG. 2

INFORMATIONAL MESSAGES

The words IMPORTANT and NOTE are not connected to personal safety, but are used to give additional information and tips for operating or servicing this equipment.

IMPORTANT: Identifies special instructions or procedures which, if not strictly observed, can result in damage to or destruction of the machine, process, or the surroundings.

NOTE: Identifies points of particular interest for more efficient and convenient repair or operation.

Safety

A WORD TO THE OPERATOR

FIG. 3: It is YOUR responsibility to read and understand the safety section in this manual and the manual for all attachments before operating this machine. Remember YOU are the key to safety. Good safety practices not only protect you, but also the people around you.

Study the features in this manual and make them a working part of your safety program. Keep in mind that this safety section is written only for this type of machine. Practice all other usual and customary safe working precautions, and above all REMEMBER - SAFETY IS YOUR RESPONSIBILITY. YOU CAN PREVENT SERIOUS INJURY OR DEATH.

This safety section is intended to point out some of the basic safety situations that may be encountered during the normal operation and maintenance of your machine. This section also suggests possible ways of dealing with these situations. This section is NOT a replacement for other safety practices featured in other sections of this manual.

Personal injury or death may result if these precautions are not followed.

Learn how to operate the machine and how to use the controls properly.

Do not let anyone operate the machine without instruction and training.

For your personal safety and the personal safety of others, follow all safety precautions and instructions found in the manuals and on safety signs affixed to the machine and all attachments. Use only approved attachments and equipment.

Make sure your machine has the correct equipment needed by the local regulations.



WARNING: An operator should not use alcohol or drugs which can affect their alertness or coordination. An operator on prescription or 'over the counter' drugs needs medical advice on whether or not they can properly operate machines.



CAUTION: If any attachments used on this equipment have a separate Operator Manual, see that manual for other important safety information.



CAUTION: See the engine Operation and Maintenance Manual for other important safety information.



CAUTION: See the combine Operator Manual for other important safety information.

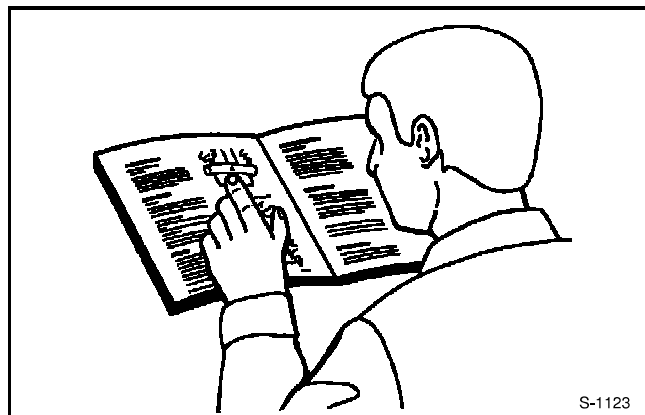


FIG. 3

FIRE PREVENTION AND FIRST AID

FIG. 4: If equipped, a fire extinguisher (1) will be install on the front of the left-hand combine platform.

Be prepared for emergencies. Always carry one or more suitable fire extinguishers - ABC rating, dry chemical, 2.2 KG (5 lb). Check fire extinguishers regularly to make sure the fire extinguishers are properly charged and in operating condition.

Mounting a fire extinguisher near the operator cab and a fire extinguisher near the engine compartment is recommended.

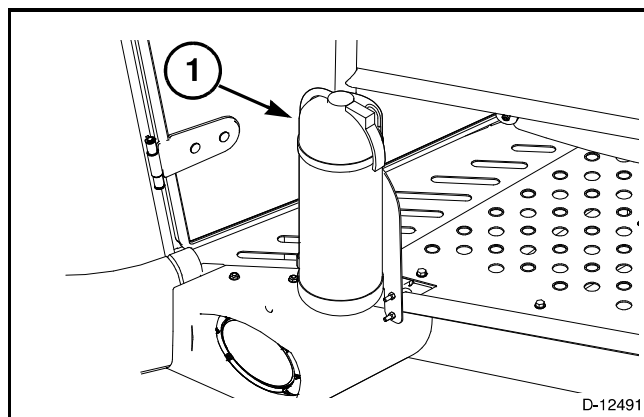


FIG. 4

FIG. 5: To reduce the risk of fire or damage if fire occurs:

- Check for over heated components
- Frequently clean the engine compartment of any chaff and crop debris
- Frequently clean areas of the machine & header where crop can accumulate
- Mount a fire extinguisher within easy reach at the front and rear of the machine

If any flame cutting, welding, or arc welding is to be done on the machine or header, make sure to clear any crop material or debris from around the area. Make sure the area below the work area is clear of any flammable material as falling molten metal or sparks can ignite the material.

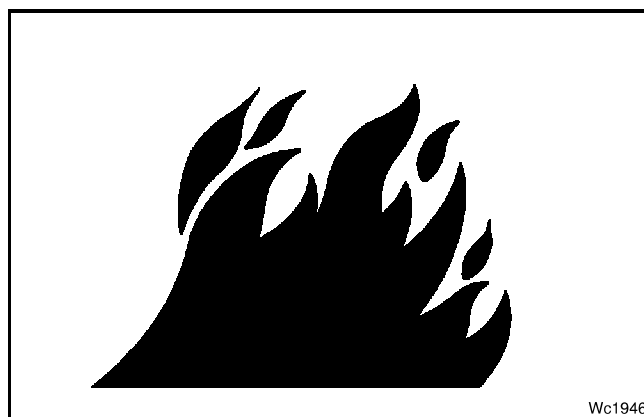


FIG. 5

PREPARE FOR OPERATION

Make sure the combine is in the proper operating condition as shown in the combine operator manual. Make sure the machine has the correct equipment needed by local regulations.

Read and understand all operating instructions and precautions in this manual before operating or servicing the machine. Make sure you know and understand the positions and operations of all controls.

Make sure that all controls are in neutral and the parking brake is engaged before starting the machine. Make sure that all people are well away from your area of work before starting and operating the machine.

All equipment has a limit. Make sure you understand the speed, brakes, steering, stability, and load characteristics of the machine before you start. Check all controls in an area clear of people and obstacles before starting your work.

Be aware of the machine size and have enough space available to permit operation. Never operate the machine at high speeds in crowded locations.

Safety

OPERATION



WARNING: In order to provide a better view, photographs and illustrations in this manual can show an assembly with the shield removed. Do not operate the combine unless all shields are in location. Replace the shields immediately after completion of inspection, repairs, cleaning or adjustments and before operation begins.

FIG. 6: Wear close fitting clothing and personal protection equipment for operating or doing lubrication and maintenance on the combine. Tie up long hair to prevent hair from becoming entangled in moving parts.

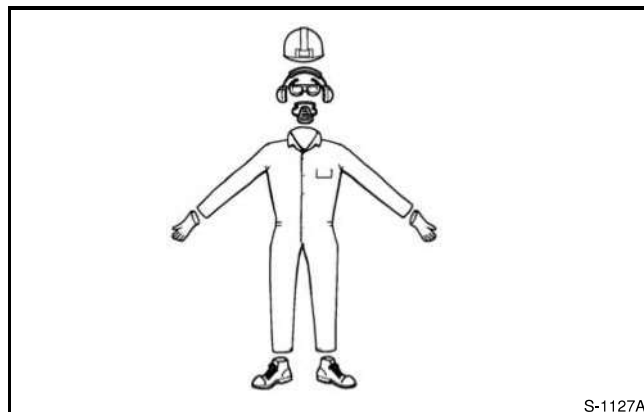


FIG. 6

FIG. 7: Face the ladder and use the handrails when getting on or off the combine.



FIG. 7

FIG. 8: Never operate the engine in a closed building unless the exhaust is vented outside.

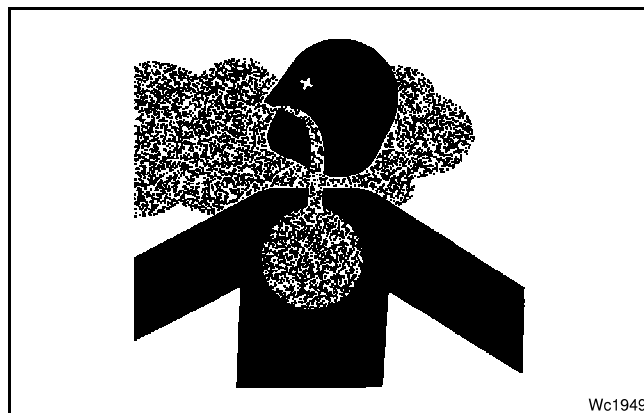


FIG. 8

Massey Ferguson®

9545 / 9565
Rotary Combine

SERVICE MANUAL 4283564M2

CONTENTS

GENERAL INFORMATION	01
SPECIFICATIONS	02
ENGINE WORKSHOP MANUAL	03A
ENGINE - DRIVES, COOLING AND FUEL.....	03B
MATERIAL HANDLING.....	04
MATERIAL DISCHARGE	05
REAR AXLE	06
THRESHING AND SEPARATING.....	07
FRONT AXLE	08
HYDRAULICS	09
CAB AND HVAC.....	10
WIRING DIAGRAMS	11A
ELECTRICAL	11B
DIAGNOSTICS	12