Workshop Service Manual

MASSEY FERGUSON

1700 Series Compact Tractor

1726E
1734E
1739E

North America
4205 River Green Parkway, Duluth GA 30096 USA

November 2018
4283549M3
NA
English

MASSEY FERGUSON

CALIFORNIA
Proposition 65 Warning

WARNING: Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, or other reproductive harm.

WARNING: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm. Wash hands after handling.

1 General

1.1 General information

1.1.1 Introduction to this service manual

This service manual gives information from engineering tests, operating data, and the latest service techniques at the time of publication. Read this service manual carefully before doing any service on the machine.

The photos and illustrations used in this service manual were current at the time of publication. Production changes can cause machines to vary from the photos and the illustrations. The manufacturer reserves the right to redesign and change machines as necessary without notification.

WARNING:
Some pictures in this manual show the machine with shields or guards removed to permit for a better view of the subject of the picture. All shields and guards must be in position before operating the machine.

Machine movement when in normal use determines right-hand and left-hand.

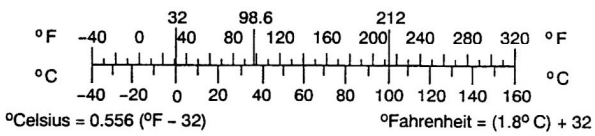
1.1.2 Units of measurement

Measurements are given in metric units followed by the equivalent in US units. Hardware sizes are given in millimeters for metric hardware and inches for US hardware.

1.1.3 Conversion table

	MULTIPLY:	BY:		To Get: MULTIPLY	BY:		To Get:
LINEAR	inches	x 25.4	=	millimeters (mm)	x 0.03937	=	inches
	feet	x 0.3048	=	meters (m)	x 3.281	=	feet
	yards	x 0.9144	=	meters (m)	x 1.0936	=	yards
	miles	x 1.6093	=	kilometers (km)	x 0.6214	=	miles
	inches	x 2.54	=	centimeters (cm)	x 0.3937	=	inches
	microinches	x 0.0254	=	micrometers (um)	x 39.37	=	microinches
AREA	$inches^2$	x 645.16	=	$millimeters^2$ (mm^2)	x 0.00155	=	$inches^2$
	$inches^2$	x 6.4516	=	$centimeters^2$ (cm^2)	x 0.155	=	$inches^2$
	$feet^2$	x 0.0929	=	$meters^2$ (m^2)	x 10.764	=	$feet^2$
	$yards^2$	x 0.8361	=	$meters^2$ (m^2)	x 1.196	=	$yards^2$
	acres	x 0.4047	=	$hectometers^2$ (hm^2)	x 2.471	=	acres
			=	hectares (ha)			
VOLUME	$inches^3$	x 16387	=	$millimeters^3$ (mm^3)	x 0.000061	=	$inches^3$
	$inches^3$	x 16.387	=	$centimeters^3$ (cm^3)	x 0.06102	=	$inches^3$
	$inches^3$	x 0.01639	=	liters	x 61.024	=	$inches^3$
	quarts	x 0.94635	=	liters	x 1.0567	=	quarts
	gallons	x 3.7854	=	liters	x 0.2642	=	gallons
	$feet^3$	x 28.317	=	liters	x 0.03531	=	$feet^3$
	$feet^3$	x 0.02832	=	$meters^3$ (m^3)	x 35.315	=	$feet^3$
	fluid oz.	x 29.57	=	milliliters (ml)	x 0.03381	=	fluid oz.
	$yards^3$	x 0.7646	=	$meters^3$ (m^3)	x 1.3080	=	$yards^3$
	teaspoons	x 4.929	=	milliliters (ml)	x 0.2029	=	teaspoons
	cups	x 0.2366	=	liters	x 4.227	=	cups
	bushel	x 35.239	=	liters	x 0.02838	=	bushels
	bushel	x 0.03524	=	$meters^3$ (m^3)	x 28.378	=	bushels
MASS	ounces (av)	x 28.35	=	grams (g)	x 0.03527	=	ounces (av)
	pounds (av)	x 0.4536	=	kilograms (kg)	x 2.2046	=	pounds (av)
	tons (2000 lbs)	x 907.18	=	kilograms (kg)	x 0.001102	=	tons (2000 lbs)
	tons (2000 lbs)	x .90718	=	metric tons(t)	x 1.1023	=	tons(2000 lbs)
	tons (long) (2240 lbs)	x 1016.05	=	kilograms (kg)	x .000984	=	tons (long) (2240 lbs)
FORCE	ounces - f (av)	x 0.278	=	newtons (N)	x 3.597	=	ounces - f (av)
	pounds - f (av)	x 4.488	=	newtons (N)	x 0.2248	=	pounds - f (av)
	kilograms - f	x 9.807	=	newtons (N)	x 0.10197	=	kilograms - f
PRESSURE OR STRESS	pounds/sq.in.	x 6.895	=	kilopascals (kPa)	x 0.145	=	pounds/sq. in.
	pounds/sq.in.	x 0.0689	=	bar	x 14.503	=	pounds/sq. in.
POWER	horsepower	x 0.746	=	kilowatts (kW)	x 1.34	=	horsepower
	ft-lbf/min.	x 0.0226	=	watts (W)	x 44.25	=	ft - lbf/min.
TORQUE	pound - inches	x 0.11298	=	newton-meters (N.m)	x 8.851	=	pound-inches
	pound - feet	x 1.3558	=	newton-meters (N.m)	x 0.7376	=	pound-feet
VELOCITY	miles/hour	x 1.6093	=	kilometers/hour (km/h)	x 0.6214	=	miles/hour
	feet/sec.	x 0.3048	=	meters/sec. (m/s)	x 3.281	=	feet/sec.
	kilometers/hr.	x 0.27778	=	meters/sec. (m/s)	x 3.600	=	kilometers/hr.
	miles/hours	x 0.4470	=	meters/sec. (m/s)	x 2.237	=	miles/hour

TEMPERATURE



MetConv.doc

CMCHE0210035801

Fig. 1

1.1.4 Table of contents

This manual has a table of contents at the front. The table of contents shows the divisions. The individual divisions also have a table of contents.

1.1.5 Page numbers

All pages have two numbers, such as 01-25. The first number shows the division. The second number shows the page in the division.

Page numbers occur on the lower right-hand or lower left-hand corner of each page.

1.1.6 Intended use

This machine is designed solely for use in customary agricultural operations.

Do not use this machine for any application or purpose other than those described in this manual. The manufacturer accepts no liability for damage or injury resulting from misuse of this machine.

Compliance with the conditions of operation, service and repair as specified by the manufacturer constitute essential elements for the intended use of this machine.

This machine should be operated, serviced and repaired only by qualified persons familiar with its characteristics and familiar with the relevant safety rules and procedures.

All generally recognized safety regulations and road traffic regulations must be obeyed at all times.

Any unauthorized modifications performed on this machine will relieve the manufacturer of all liability for any resulting damage or injury.

1.1.7 Proper disposal of waste

Improper disposal of waste can pollute the environment and ecology. A few examples of potentially harmful equipment waste can include, but not limited to, items such as oil, fuel, coolant, brake fluid, filters, battery chemicals, tires, etc.

Use leak proof containers when draining fluids. Do not use food or beverage containers to collect waste fluids, as food or beverage container(s) may mislead someone into drinking from them.

Do not pour or spill waste onto the ground, down a drain, or into any water source.

Air conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air conditioning service center to recover and recycle used air conditioning refrigerants.

Inquire with local environmental or recycling center on the proper way to recycle or dispose waste.

1.2 Safety

1.2.1 Safety symbol

The safety symbol tells you about a potentially hazardous area!

Look for the safety symbol in this manual and on the machine. The safety symbols tell you that there is important safety instructions in the manual.

Fig. 2

1.2.2 Safety messages

The words DANGER, WARNING or CAUTION are used with the safety symbol. Learn these safety messages and obey the recommended precautions and safety instructions.

DANGER:
If you do not obey the recommended precautions and safety instructions, DEATH OR INJURY will occur.

WARNING:
If you do not obey the recommended precautions and safety instructions, DEATH OR INJURY can occur.

CAUTION:
If you do not obey the recommended precautions and safety instructions, INJURY can possibly occur.

Fig. 3

1.2.3 Information messages

The words important and note are not related to personal safety, and are used to give information about the operation and servicing of the machine.

IMPORTANT: *Identifies special instructions or procedures which, if not followed, can cause damage to the machine, the process, or the area around the machine.*

NOTE: *Information to make procedures easier.*

1.2.4 Safety signs

WARNING:
Do not remove the safety signs. Replace safety signs that you cannot read, are damaged, or are missing.

Clean the machine surface with a weak soap and water solution before you replace the safety signs. Replacement safety signs are available from your dealer.

Always make sure that safety signs are in the correct locations and that you can read the safety signs. Illustrations of safety sign locations are at in this section.

Keep the safety signs clean. If necessary, use a weak soap and water solution.

1.2.5 A word to the technician

Read and understand the safety section in this service manual before operating or servicing the machine. Read and understand the safety sections in the manuals for all attachments before operating or servicing attachments. The technician has the key to safety. Good safety practices protect everyone.

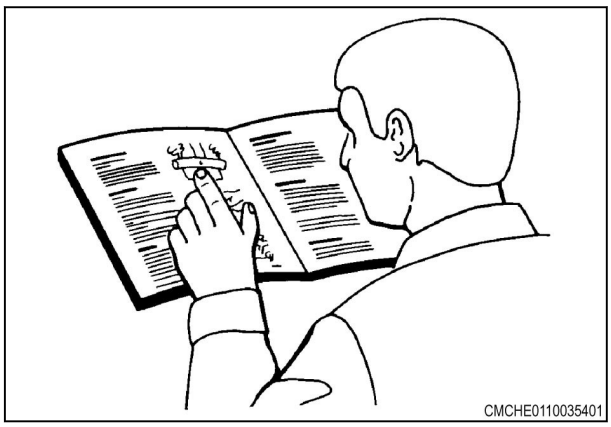


Fig. 4

Study the safety information in this service manual. Make the safety information a working part of the safety program. The safety information in this service manual applies specifically to this type of machine. Always do all other usual and customary safe working precautions. Remember - The technician has the responsibility for safety. Good safety practices can prevent serious injury or death.

The safety section points out some basic safety situations that can occur during the operation and maintenance of the machine. The safety section also suggests possible ways to deal with these situations. The safety section does not replace safety practices in other parts of this service manual.

Practice good safety to help prevent injury or death.

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

Do not let other persons operate the machine without instruction and training.

Follow all safety precautions and instructions in the manuals and on safety signs affixed to the machine and all attachments.

Use only approved attachments and equipment.

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

1.2.6 The service manual

Read the table of contents and basic layout. Become familiar with all parts of this service manual. This service manual gives the technician very important information.

Machine movement when in normal use determines right-hand and left-hand.

This manual covers general safety practices for this machine.

The photos, illustrations, and data used in this manual were current at the time of printing. Inline production changes can make machines vary from the information in the service manual. The manufacturer reserves the right to redesign and change the machine as necessary without notification.

WARNING:
In some of the illustrations and photos used in this manual, shields or guards may have been removed for clarity. Never operate the machine with any shields or guards removed. If the removal of shields or guards is necessary to make a repair, they must be replaced before operation.

1.2.7 Operation

1.2.7.1 Prepare for operation

Read and understand all operation instructions and precautions in this manual before you operate the machine or do the servicing.

Make sure that you know and understand the positions and operations of all controls. Make sure that all controls are in neutral and that the parking brake is applied before you start the machine.

Make sure that all persons are away from your area of work before you start and operate the machine. Examine and learn the controls in an area that is clear of persons and obstacles before you start work. Know the machine dimensions and make sure that you have sufficient space available to operate the machine. Do not operate the machine at high speeds in crowded areas.

It is important to know and use the correct procedures when you do work around and operate the machine. Do not let children or unqualified persons operate the machine. Keep others, especially children, away from your area of work. Do not let others to ride on the machine.

Make sure that the machine is in good condition for operation. Refer to the operator manual. Make sure that the machine has the correct equipment required by local regulations.

1.2.7.2 Roll over protective structure

The roll over protective structure (ROPS) is effective in reducing injuries during overturns. Overturning a tractor without ROPS or with the ROPS folded down can result in serious injury or death. Operate with ROPS folded down only when conditions make this necessary. Return ROPS to upright, locked position as soon as conditions permit.

Do not weld, drill, or alter the ROPS.

If the tractor has been rolled over or the ROPS frame has been damaged in any manner, the ROPS must be replaced. Do not attempt to repair a damaged ROPS. If damage does occur, consult your dealer and replace all damaged parts.

Before using the tractor make sure the ROPS frame is not damaged and it is securely fastened to the tractor .

Do not attach chains, ropes, or cables to the ROPS for pulling purposes - damage to the ROPS and/or overturn of the tractor may result. Always pull from the tractor drawbar.

Observe all recommendations and instructions regarding the installation of covers or roofs which are used as sunshields only, and do not afford the operator protection from falling objects.

1.2.7.3 General information

When parking, park the machine on a solid level surface and lower any implements to the ground. Put all controls in neutral and apply the park brake. Stop the engine and take the key with you.

WARNING:
Do not leave the machine unattended with any implement or attachment in the raised position. Lower the implement or attachment fully before leaving the machine. A sudden loss of hydraulic pressure can cause the implement or attachment to drop without warning.

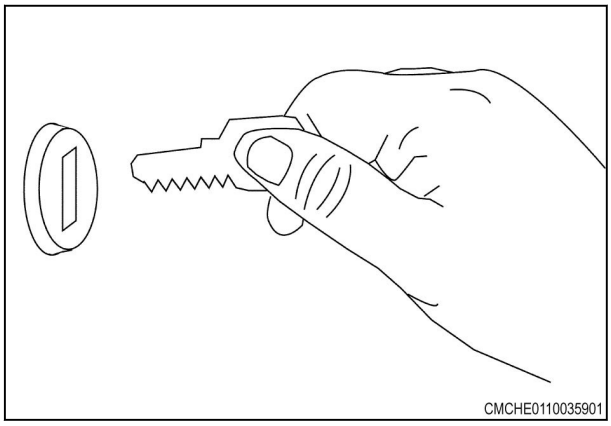


Fig. 5

Make sure the machine is in the proper operating condition according to the Operator Manual.

Do not dismount from moving machinery.

Stay off slopes too steep for operation.

Be aware of the size of the machine and have enough space available to allow for operation.

Do not operate near the edge of banks. Setback distance from the bank must equal or exceed, the overall height of the bank.

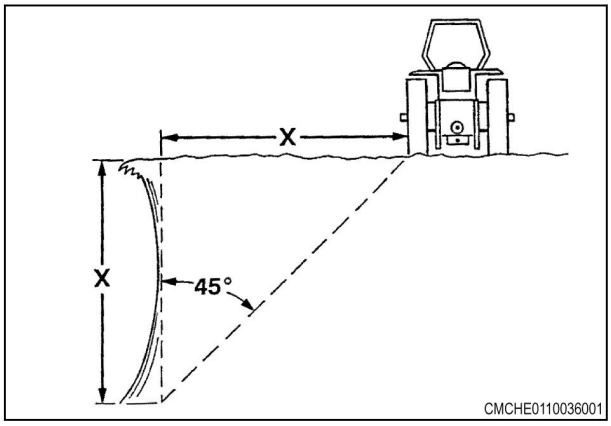


Fig. 6

Whenever possible, travel directly up or down slopes, keeping the heavy end of the tractor on the uphill side. If necessary to cross a steep slope, avoid turning uphill. Slow down and make a wide turn.

Do not operate on steep slopes as overturn may result.

On models with independent brake pedals, keep the brake pedals latched together at all times unless independent braking is required. Never use independent braking during transport.

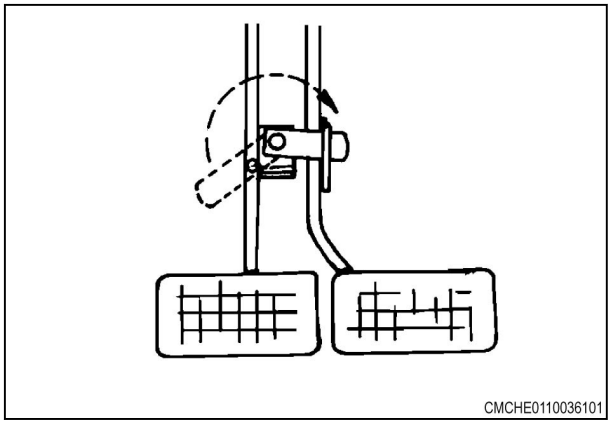


Fig. 7

Always drive at a proper speed relative to local conditions and ensure your speed is low enough for an emergency stop.

Reduce speed prior to turns to avoid the risk of overturning.

Keep speed to a minimum.