

NEW HOLLAND

REPAIR MANUAL

TC29DA
TC33DA
Tractors

NEW HOLLAND AGRICULTURE

SERVICE

87057407

Order the manual at mid-west-tech.com >

TC29DA, TC33DA
REPAIR MANUAL
COMPLETE CONTENTS

SECTION 00 - GENERAL INFORMATION 2

SECTION 10 - ENGINE 3

SECTION 18 - CLUTCH 10

SECTION 21 - GEAR TRANSMISSION 11

SECTION 25 - FWD AXLE 14

SECTION 27 - DIFFERENTIAL, REAR AXLE 17

SECTION 29 - HYDROSTATIC TRANSMISSION 18

SECTION 31 - POWER TAKE-OFF SYSTEMS 22

SECTION 33 - BRAKES 24

SECTION 35 - HYDRAULIC SYSTEM 24

SECTION 41 - STEERING SYSTEMS 27

SECTION 44 - WHEELS AND TIRES 29

SECTION 55 - ELECTRICAL SYSTEM 30

SECTION 90 - PLATFORM 36

The following pages are the collation of the contents pages from each section and chapter of the TC29DA, TC33DA Repair manual. Complete Repair part # 87057407.

The sections used through out all New Holland product Repair manuals may not be used for each product. Each Repair manual will be made up of one or several books. Each book will be labeled as to which sections are in the overall Repair manual and which sections are in each book.

The sections listed above are the sections utilized for the TC29DA, TC33DA Tractors.

© 2004 CNH America LLC
Printed in U.S.A.

87057412 12/04

MidWestTech | New Holland TC29DA, TC33DA Tractor Service Manual | Publication 87057... Order the manual at mid-west-tech.com >

SECTION 00 - GENERAL INFORMATION

BOOK 1 - 87057408

Chapter 1 - General Information

CONTENTS

Section	Description	Page
	Personal Safety	2
	Machine Safety	2
	Safety	3
	Precautionary Statements	3
	Servicing the Tractor	3
	Operating the Tractor	4
	Driving the Tractor	4
	Operating the PTO	5
	Diesel Fuel	5
	Safety Frame (ROPS)	5
	Safety Decals	6
	Instruction Decals	7
	Ecology and the Environment	11
	Specifications	13
	General Dimensions	19
	Tightening Torques	22
00 400	Lubrication and Maintenance	24
	Lubrication	24
	Liquid Ballast (Optional)	26
	Tire Pressure	26
	Rear Tire Liquid	26

MidWestTech | New Holland TC29DA, TC33DA Tractor Service Manual | Publication 87057... Order the manual at mid-west-tech.com >

SECTION 10 - ENGINE

BOOK 1 - 87057408

Chapter 1 - Engine Systems

CONTENTS

Section	Description	Page
	Specifications	6
	Engine Bolt Torque Specifications	14
	Engine Fuel System Bolt Torque Specifications	14
	Metric Bolt Torque Specifications	15
	Special Tools	16
	Compression Test and Tools	16
	Description of Operation – General Information	17
	Cylinder Head and Valve Train Components	18
	Cylinder Block Assembly	18
	Troubleshooting	20
	Overhaul	24
	Engine	24
	Preparation	24
	Fuel Injector and Glow Plug	25
	Removal	25
	Oil Pressure Switch	26
	Removal	26
	Temperature Sending Switch and Alternator	26
	Removal	26
	Fan, Water Pump and External Oil Tube	26
	Removal	26
	Head Cover	27
	Removal	27
	Rocker Arm Shaft and Support Bracket	27
	Removal	27
10 101	Cylinder Head	28
	Removal	28
	Valve Tappet	28
	Removal	28
	Fuel Shutoff Solenoid	28
	Removal	28
	Timing Gear Cover	29
	Removal	29

MidWestTech | New Holland TC29DA, TC33DA Tractor Service Manual | Publication 87057... Order the manual at mid-west-tech.com >

LIQUID BALLAST (OPTIONAL)

It is a common practice to add weight to the tractor by filling the rear tires with liquid. A calcium chloride ($CaCl_2$) and water solution is recommended due to its low freezing point and greater density (weight per gallon) than pure water.

Never exceed the total recommended weight for the tractor. Because special equipment is required to fill the tires, consult your New Holland Dealer.

Tires should never be filled beyond 75%. At 75% full, the liquid will come to the valve stem when the valve stem is at its highest point at the top of the wheel.

TIRE PRESSURE

Tire pressure must be considered when adding weights, implements, or attachments to the tractor or damage to the tractor may occur.

The chart below outlines tire inflation pressures.

FRONT TIRE INFLATION PRESSURES		
Tire Type	**Tire Size**	**Inflation Pressure**
Agricultural: FWD	7-14, 4PR, R1	0.6-1.8 bar (8-26 PSI)
Turf: FWD	24 x 8.50-14, 4PR, R3 25/10.50LL x 15 - 6PR, R3	0.6-15 bar (8-22 PSI) 0.6 bar (8 PSI)
Industrial (R4)	25 x 8.50-14, 6PR, R4	0.6-2.2 bar (8-32 PSI)
REAR TIRE INFLATION PRESSURES		
Agricultural	11.2-24, 4PR, R1	0.8-1.2 bar (12-18 PSI)
Turf	13.6-16, 4PR, R3 41/18LL x 16.1, 6 PR, R3	0.8-1.0 bar (12-14 PSI) 0.4 bar (6 PSI)
Industrial (R4)	15-19.50, 6PR, R4	0.8-1.4 bar (12-20 PSI)

NOTE: *Do not underinflate or overinflate tires. Do not exceed maximum inflation pressure listed.*

REAR TIRE LIQUID

Ballast Weights (Per Tire) 600 g/5 lbs. Gal Solution/CaCl2

Tire Type	Tire Size	Approximate Added Weight
Agricultural	11.2 x 24, 4PR, R1	115 Kg (253 lbs.)
Turf	13.6 x 16, 4PR, R3 41/18LL x 16.1, 6PR, R3	151 Kg (333 lbs.) NA
Industrial (R4)	19.50 x 15, 6PR, R4	152 Kg (334 lbs.)

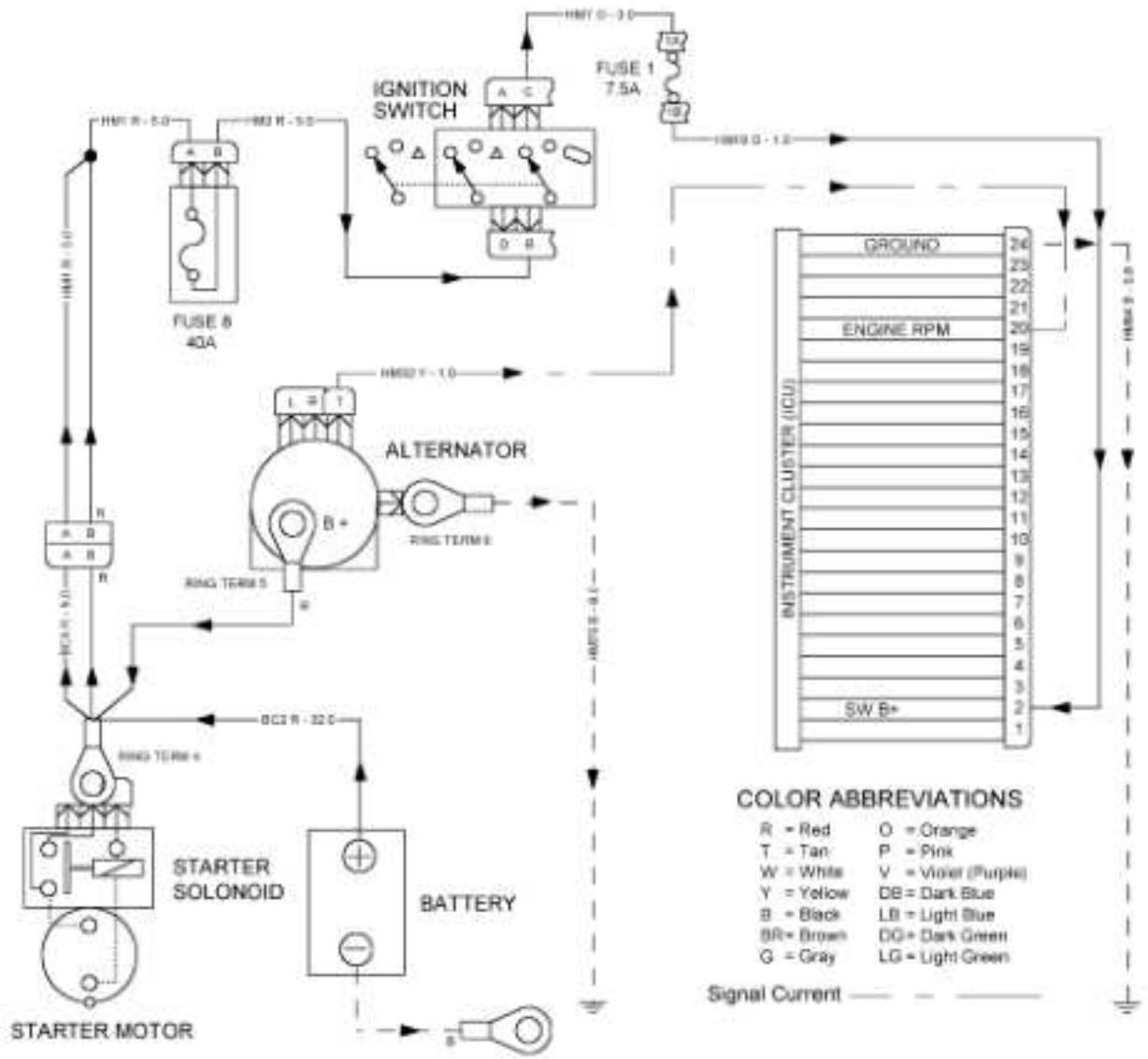
MidWestTech | New Holland TC29DA, TC33DA Tractor Service Manual | Publication 87057... Order the manual at mid-west-tech.com >

TROUBLESHOOTING - FUEL INJECTORS

CONDITION	CAUSE	REMEDY
Nozzle does not "buzz" while injecting	Needle valve stuck	Check needle valve for carbon build-up and binding
	Excessive fuel leakage	Check valve and valve seat for scores or other indications of leakage
	Nozzle damage	Inspect faces and tighten nozzle retaining nut
Nozzle leakage	Needle valve worn	Replace nozzle assembly
	Blocked nozzle assembly	Check for carbon or foreign matter on faces of nozzle and nozzle holder. Flush, clean, or replace.
	Loose nozzle retaining nut	Inspect faces and tighten nozzle retaining nut
Nozzle opening pressure incorrect	Incorrectly adjusted nozzle retaining nut	Check retaining nut for looseness
	Damaged nozzle or seized needle valve	Replace nozzle assembly
	Blocked nozzle orifice	Check orifice for carbon or foreign matter. Flush clean or replace.
Nozzle seat leakage	Nozzle incorrectly seated	Check for carbon or foreign matter on faces of nozzle and nozzle holder. Flush, clean, or replace.
	Sticking or binding needle valve	Repair or replace nozzle assembly

MidWestTech | New Holland TC29DA, TC33DA Tractor Service Manual | Publication 87057... Order the manual at mid-west-tech.com >

TACHOMETER CIRCUIT



60043964

31

MidWestTech | New Holland TC29DA, TC33DA Tractor Service Manual | Publication 87057... Order the manual at mid-west-tech.com >