# DX18E
# DX22E
# DX24E
# DX25E

Tractors

# SERVICE MANUAL

87352316

CASE IH AGRICULTURE



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

# DX18E, DX22E, DX24E, DX25E REPAIR MANUAL COMPLETE CONTENTS


SECTION 00 - GENERAL INFORMATION ..... 2

SECTION 10 - ENGINE SYSTEMS ..... 4

SECTION 25 - FWD ..... 11

SECTION 27 - DIFFERENTIAL AND REAR AXLES ..... 13

SECTION 29 - HYDROSTATIC TRANSMISSION ..... 14

SECTION 31 - PTO ..... 17

SECTION 33 - BRAKES ..... 18

SECTION 35 - HYDRAULIC SYSTEM ..... 19

SECTION 41 - POWER STEERING ..... 22

SECTION 44 - WHEELS ..... 24

SECTION 55 - ELECTRICAL SYSTEM ..... 25

SECTION 58 - MWX154S - MWX160S MID MOUNT MOWER ..... 34

SECTION 90 - PLATFORM ..... 35


**The following pages are the collation of the contents pages from each section and chapter of the DX18E, DX22E, DX24E, and DX25E Repair manual. Complete Repair part # 87352316.**

**The sections used through out all Case IH 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 DX18E, DX22E, DX24E, and DX25E Tractors.**


© 2005 CNH America LLC
Printed in U.S.A.



87352320 6/05



MidWestTech | Case DX18E, DX22E, DX24E, DX25E Tractor Service Manual | Publication... Order the manual at mid-west-tech.com >

# SECTION 00 - GENERAL INFORMATION

BOOK 1 - 87352317

## Chapter 1 - General Information

CONTENTS


| Section | Description | Page |
|---|---|---|
| | Precautionary Statements | 3 |
| | Personal Safety | 3 |
| | Machine Safety | 3 |
| | Information | 3 |
| | Safety | 4 |
| | Precautionary Statements | 4 |
| | The Tractor | 4 |
| | Servicing the Tractor | 4 |
| | Operating the Tractor | 5 |
| | Driving the Tractor | 5 |
| | Operating the PTO | 6 |
| | Diesel Fuel | 6 |
| | Safety Frame (ROPS) | 6 |
| | Safety Decals | 7 |
| | Instruction Decals | 10 |
| | Ecology and the Environment | 16 |
| | Helpful Hints | 16 |
| | Universal Symbols | 17 |
| | General Information | 18 |
| | Please Read Carefully | 18 |
| | Minimum Hardware Tightening Torques | 19 |
| | Metric Bolt Torque Specifications | 20 |
| | Lubrication and Maintenance | 21 |
| | General Information | 21 |
| | Grease Fittings | 21 |
| | Lubrication and Maintenance Chart | 23 |
| | Lubrication Fittings | 24 |
| | Diesel Fuel | 24 |
| | Fuel Usage Safety | 24 |




MidWestTech | Case DX18E, DX22E, DX24E, DX25E Tractor Service Manual | Publication... Order the manual at mid-west-tech.com >

# SECTION 00 - GENERAL INFORMATION

BOOK 1 - 87352317

## Chapter 1 - General Information (Continued)

CONTENTS


| Section | Description | Page |
|---|---|---|
| | Specifications | 25 |
| | Engine | 25 |
| | Capacities | 25 |
| | Cooling System | 26 |
| | Electrical System | 26 |
| | Fuel System | 26 |
| | Brakes | 27 |
| | Steering | 27 |
| | Power Take-Off (PTO) | 27 |
| | Hydraulic Lift Section | 27 |
| | Transmission Speeds | 28 |
| | Cast Iron Weights | 29 |
| | Drawbars | 29 |
| | 3-Point Hitch | 29 |
| | Tires | 29 |
| | Wheel Bolt Torques | 29 |
| | ROPS Attaching Bolt Torques | 29 |
| | General Dimensions | 30 |
| | Wheel Tread Settings | 30 |
| | Liquid Ballast (optional) | 32 |
| | Tire Pressure | 32 |

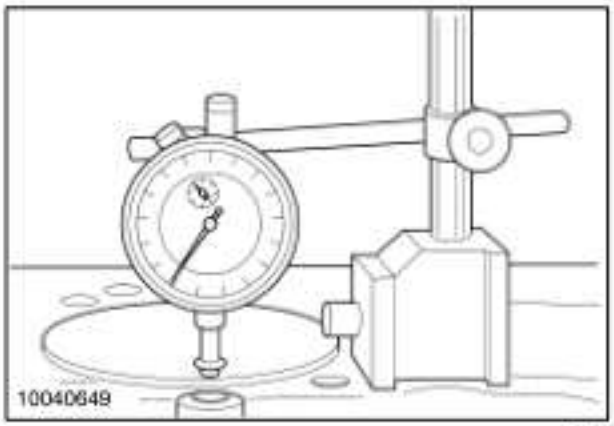



MidWestTech | Case DX18E, DX22E, DX24E, DX25E Tractor Service Manual | Publication... Order the manual at mid-west-tech.com >

## HEAD GASKET SELECTION

During assembly the ultimate engine compression is established by the thickness of the head gasket used. For service replacement, head gaskets of different thickness are available. The correct head gasket must be selected based upon the amount the piston protrudes above the face of the block when at top dead center. The correct head gasket usage is determined as follows:

Position each of the pistons at top dead center and, using a dial indicator, determine the distance each piston projects above the face of the block.




100

***NOTE:*** *Measure each of the pistons while holding a slight down pressure on the piston. Use the dimension taken from the cylinder which has the greatest projection and select a head gasket as indicated in the following chart.*

***NOTE:*** *The variation in the amount of protrusion among all pistons must be within 0.1 mm (0.004 in.).*

| Tractor Model | Measurement Value | Gasket Part No. | Installed Thickness |
|---|---|---|---|
| **DX18E DX22E** | 0.55 - 0.65 mm (0.022 - 0.026 in.) | SBA111147270 | 1.2 mm (0.047 in.) |
| | 0.65 - 0.75 mm (0.026 - 0.030 in.) | SBA111147280 | 1.3 mm (0.051 in.) |
| **DX24E DX25E** | 0.55 - 0.65 mm (0.022 - 0.026 in.) | SBA111147560 | 1.2 mm (0.047 in.) |
| | 0.65 - 0.75 mm (0.026 - 0.030 in.) | SBA111147570 | 1.3 mm (0.051 in.) |

***NOTE:*** *Last four digits of part number are stamped on the head gasket. Install head gasket with part numbers facing up.*



MidWestTech | Case DX18E, DX22E, DX24E, DX25E Tractor Service Manual | Publication... Order the manual at mid-west-tech.com >

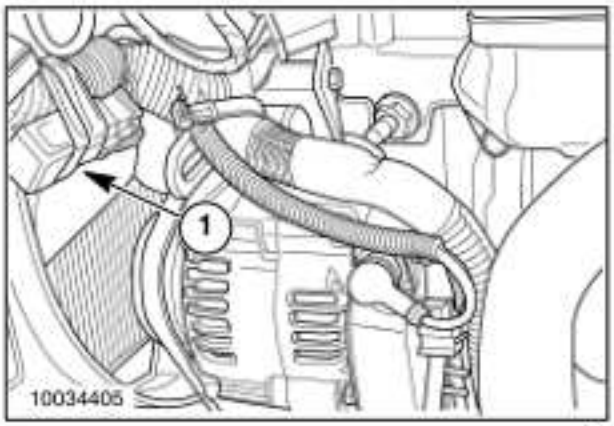
## DIODES

### Safety Start/Charging System Diode Pack

The Safety Start/Charging System diode pack, 1, is located under the coolant reserve tank, and attached to the tractor wiring harness. Diodes allow the use of one wire within multiple circuits to control current flow to electrical components such as relays.

***NOTE:*** *Charging system diode is located beneath the starter motor on DX18E – on or above Pin # HDG110001, DX22E and DX25E.*

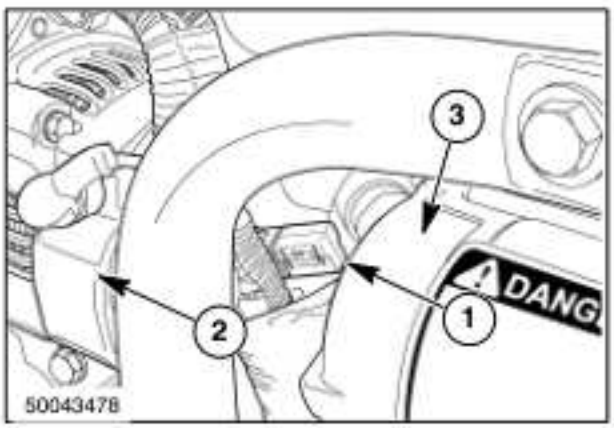
***NOTE:*** *Removal, Testing and Installation procedures are the same for both the Safety Start/Charging System Diode Pack and the Safe Operation Diode.*




67

### Safe Operation Diode

The safe operation diode, 1, is located on the left side of the engine, between the alternator, 2, and below the starting motor, 3, and attached to the wire harness.




68



MidWestTech | Case DX18E, DX22E, DX24E, DX25E Tractor Service Manual | Publication... Order the manual at mid-west-tech.com >

| TROUBLESHOOTING RIGHT TURN SIGNAL CIRCUIT | | |
|---|---|---|
| **CONDITION** | **POSSIBLE CAUSE** | **REMEDY** |
| Inoperative right turn signal | Blown 15-amp fuse | Check fuse and replace as necessary |
| | Defective flasher relay | Check relay and replace as necessary |
| | Blow bulbs | Check for any blown bulbs and replace as necessary |
| | Improper ground circuit | Check hazard light circuit connections and circuit grounds and repair as necessary |
| | Failed red hazard relay | Check relay and replace as necessary |
| | Defective combination switch | Test combination switch and replace as necessary |
| | Defective diode | Check diode and replace as necessary |

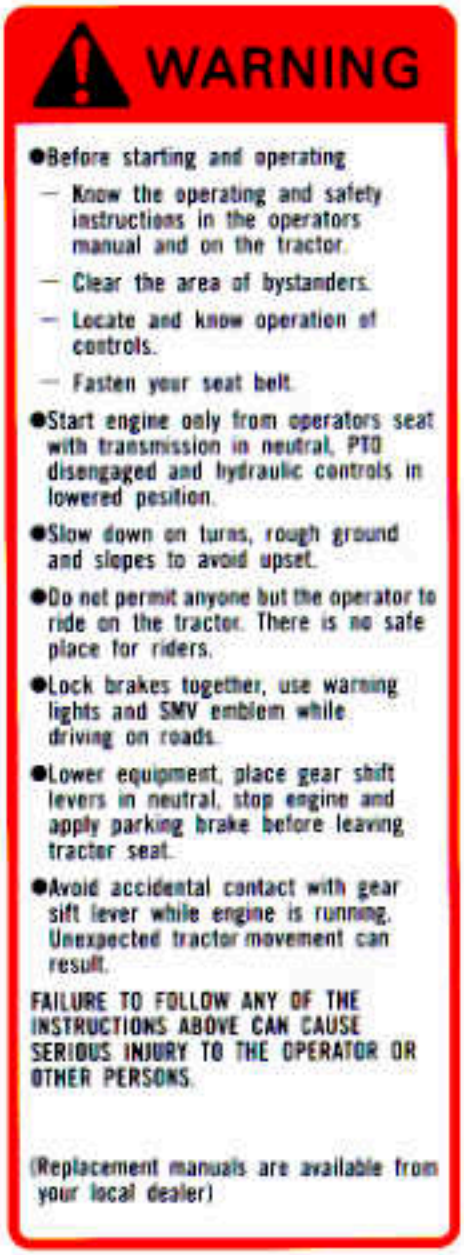


MidWestTech | Case DX18E, DX22E, DX24E, DX25E Tractor Service Manual | Publication... Order the manual at mid-west-tech.com >

# SAFETY DECALS

The following safety decals have been placed on your machine in the areas indicated. They are intended for your personal safety and for those working with you. Please take this manual and walk around your machine to note the content and location of these warning signs. Review these warning signs and the operating instructions detailed in this manual with your machine operators.

Keep the decals legible. If they are not, obtain replacements from your authorized dealer. The decal replacement part numbers are listed with each decal.



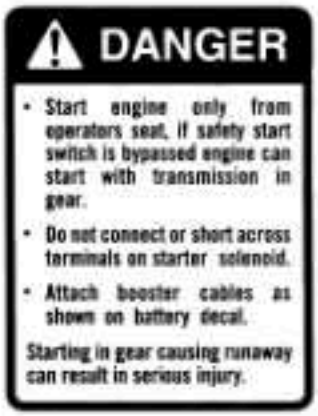

**WARNING:** Before Starting and Operating
PART NO: SBA390198380
LOCATION: In Front of Operator's Seat
Left Side of Platform




**WARNING:** Pull Only From Drawbar
PART NO: SBA390198910
LOCATION: Top of PTO Shield




**WARNING:** Do Not Operate With Shield Removed
PART NO: SBA390198480
LOCATION: Inside of Engine Side Shields




**DANGER:** Start Engine Only from Operator's Seat
PART NO: SBA190196683
LOCATION: On the Starting Motor



MidWestTech | Case DX18E, DX22E, DX24E, DX25E Tractor Service Manual | Publication... Order the manual at mid-west-tech.com >