

## ALTERNATIVE LUBRICANTS— NORTH AMERICA

Conditions in certain geographical areas outside the United States and Canada may require different lubricant recommendations than the ones printed in this technical manual or the operator's manual. Consult with your John Deere Dealer, or Sales Branch, to obtain the alternative lubricant recommendations.

**IMPORTANT: Use of alternative lubricants could cause reduced life of the component.**

If alternative lubricants are to be used, it is recommended that the factory fill be thoroughly removed before switching to any alternative lubricant.

## SYNTHETIC LUBRICANTS—NORTH AMERICA

Synthetic lubricants may be used in John Deere equipment if they meet the applicable performance requirements (industry classification and/or military specification) as shown in this manual.

The recommended temperature limits and service or lubricant change intervals should be maintained as shown in the operator's manual, unless otherwise stated on lubricant label.

Avoid mixing different brands, grades, or types of oil. Oil manufacturers blend additives in their oils to meet certain specifications and performance requirements. Mixing different oils can interfere with the proper functioning of these additives and degrade lubricant performance.

## LUBRICANT STORAGE—NORTH AMERICA

All machines operate at top efficiency only when clean lubricants are used. Use clean storage containers to handle all lubricants. Store them in an area protected from dust, moisture, and other contamination. Store drums on their sides. Make sure all containers are properly marked as to their contents. Dispose of all old, used containers and their contents properly.

## MIXING OF LUBRICANTS—NORTH AMERICA

In general, avoid mixing different brands or types of lubricants. Manufacturers blend additives in their lubricants to meet certain specifications and performance requirements. Mixing different lubricants can interfere with the proper functioning of these additives and lubricant properties which will downgrade their intended specified performance.

## ALTERNATIVE LUBRICANTS— EUROPE

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### PRODUCT IDENTIFICATION LOCATIONS

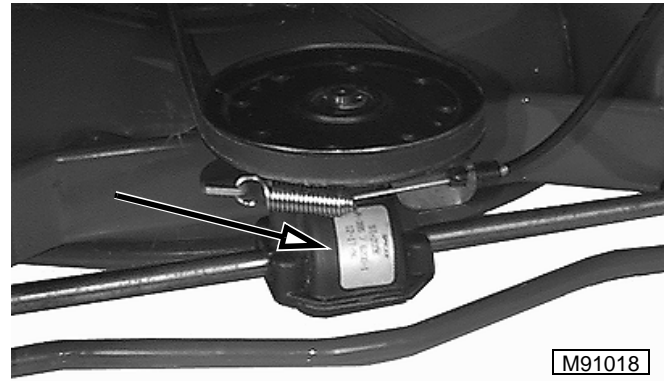
When ordering parts or submitting a warranty claim, it is **IMPORTANT** that you include the product identification number and the component product identification numbers.

The location of identification numbers and component product identification numbers are shown.

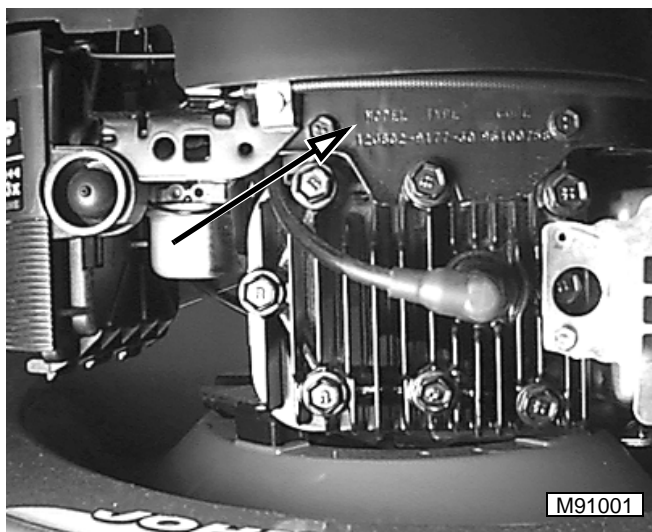
#### PRODUCT IDENTIFICATION NUMBER



#### TRANSAXLE PIN (1 SPEED SHOWN)



#### ENGINE



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## SPECIFICATIONS

### ENGINE SPECIFICATIONS

Manufacturer	Briggs & Stratton
Model	12H802
Type	Air cooled (4 cycle)
Horsepower@	6 hp (4.5 kW)@3600 rpm
Displacement	190 cc (11.6 cu. in.)
Fixed Idle Speed	3200 ± 50 rpm
Cylinder Bore (Nominal)	68.263 mm (2.6875 in.)
Stroke	51.80 mm (2.040 in.)
Lubrication Type	Splash System
Oil capacity	0.6 L (20 U.S. oz)
Oil fill	Top/left of engine



### FUEL

Type required	Unleaded Gasoline, 87 Octane
Fuel tank capacity	1.5 L (1.6 U.S. qt)
Carburetor	Float-type with primer
Fuel filter	N/A

### ELECTRICAL SPECIFICATIONS

Ignition	Electronic
Spark plug (resistor)	RJ19LM Champion
Starting	Recoil with compression release standard on all models.
Armature Air Gap	0.15-0.25 mm (0.006-0.010 in.)
Spark Plug Gap	0.071-0.084 mm (0.028-0.033 in.)

### REPAIR SPECIFICATIONS

#### Connecting Rod:

Crankpin Bore (I.D.)	27.95-27.93 mm (1.100-1.010 in.)
Crankpin Bore (Reject Size)	27.98 mm (1.102 in.)
Piston Pin Bore (I.D.)	15.89-15.90 mm (0.626-0.626 in.)

#### Crankshaft Journals:

Main Bearing I.D. (Maximum)	22.43 mm (0.883 in.)
Out-of Round (Maximum)	0.013 mm (0.001 in.)
PTO End (Reject Size)	26.92 mm (1.060 in.)
Crankpin (Reject Size)	27.86 mm (1.097 in.)
Flywheel End (Reject Size)	22.17 mm (0.873 in.)
Crankshaft End Play	0.05-0.76 mm (0.002-0.030 in.)

#### Camshaft:

Gear Journal (Reject Size)	12.65 mm (0.498 in.)
Lobes	Replace if lobes are pitted or galled

#### Cylinder Bore:

Bore I.D. (Reject Size Maximum)	68.29 mm (2.689 in.)
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**Piston Pin:**

Pin Diameter (Reject Size) .....	15.85 mm (0.624 in.)
Bearing Bore (Maximum) .....	15.90 mm (0.626 in.)

**Valve Clearance:**

Intake .....	0.10-0.20 mm (0.004-0.008 in.)
Exhaust .....	0.15-0.25 mm (0.006-0.010 in.)

**Valve Seats:**

Exhaust Angle .....	46°
Intake Angle .....	31°
Minimum Width .....	0.79 mm (0.031 in.)



**Piston Rings End Gap:**

Compression Rings (Reject Size) .....	0.89 mm (0.035 in.)
Oil Ring (Reject Size) .....	1.14 mm (0.045 in.)

**TORQUE SPECIFICATIONS**

Spark Plug .....	20 N•m (180 lb-in.)
Cylinder Head Cap Screw .....	16 N•m (140 lb-in.)
Flywheel Nut Torque .....	81 N•m (60 lb-ft)
Muffler Shoulder Bolt .....	10 N•m (89 lb-in.)
Carburetor Mount .....	10 N•m (89 lb-in.)
Intake Manifold Cap Screw .....	13.5 N•m (120 lb-in.)
Connecting Rod Cap Screw .....	11.3 N•m (100 lb-in.)
Crankcase Cover Cap Screw .....	10 N•m (89 lb-in.)
Engine to Mower Deck Cap Screws .....	55 ± 14 N•m (40 ± 10 lb-ft)
Mower Blade Bolt .....	75 ± 13 N•m (55 ± 10 lb-ft)

**SPECIAL EQUIPMENT OR TOOLS**

- JDM59 Pressure Gauge
- JTO5697 U-Tube Manometer, or JT03503 Vacuum Gauge
- 8741-F66 Plug
- JT05703 Barb Fitting
- JT05699 Line
- D-05351ST Spark Tester
- JT07270 Digital Pulse Tachometer
- JDM46-12 Flywheel Holder (Recommended)
- JDM52A Valve Seat Service Set

**OTHER MATERIALS**

SCOTCH-BRITE abrasive pads .....	Remove carbon deposits from combustion chamber
John Deere NEVER-SEEZ® Lubricant PT569 .....	Apply to crankshaft end.
TY9370 / TY9477 (#242) (Medium Strength) .....	Apply to governor shaft.
.....	Apply to blade bolt

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