

Walk-Behind Snowblowers

TECHNICAL MANUAL

**John Deere
Lawn & Grounds Care Division**

TM1234 (Jul-81)

WALK-BEHIND SNOW BLOWERS

Technical Manual

TM-1234

TABLE OF CONTENTS

SECTION 10 - GENERAL

- Group 05 - Machine Identification
- Group 10 - Specifications
- Group 15 - Fuel and Lubricants

SECTION 20 - ENGINE

- Group 05 - General Information
- Group 10 - Minor Tune-Up
- Group 15 - Cylinder Head, Valves, and Breather
- Group 20 - Internal Components
- Group 30 - Recoil Starter
- Group 40 - Specifications

SECTION 30 - FUEL SYSTEM

- Group 05 - General Information
- Group 10 - Carburetor

SECTION 40 - ELECTRICAL SYSTEM

- Group 05 - Magneto Ignition System
- Group 10 - Cranking System
- Group 15 - Safety-Start System

SECTION 50 - POWER TRAIN

- Group 05 - Belt Care and Maintenance
- Group 10 - Power Train Repair
- Group 15 - Blower and Auger Drive Repair

SECTION 60 - SPECIAL SERVICE TOOLS

- Group 05 - Convenience Service Tools

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Section 10

MACHINE IDENTIFICATION

CONTENTS

GROUP 05 - MACHINE IDENTIFICATION

Machines Covered in This Manual05-1
Machine Serial Numbers05-1
Engine Serial Numbers05-2
Engine Horsepower and Model Number05-2

GROUP 15 - FUEL AND LUBRICANTS

Fuel and Lubricants15-1
Grease Fitting Locations15-3

GROUP 10 - SPECIFICATIONS

Engine Horsepower and Model Number10-1
Engine Identification10-1
Machine Engine Model Numbers10-1
Tune-up Specifications10-2
Engine Specifications10-3
Bolt Torque Chart10-5
Set Screw Seating Torque Chart10-5

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MACHINES COVERED IN THIS MANUAL

This technical manual contains service and maintenance information for the 526, 726, 732, 826, 832 and 1032 Snow Blowers.

The manual is divided into sections. Each section covers components or systems. The information is divided into groups within each section.

CAUTION: This safety alert symbol identifies important safety messages. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.

NOTE: Metric equivalents have been included throughout this technical manual.

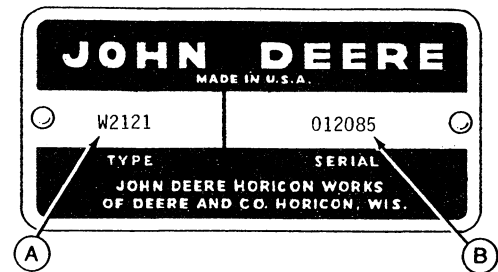
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MACHINE SERIAL NUMBERS

Each machine is assigned an individual serial number. The serial number plate is located on the engine frame housing. The illustration at the right shows a typical serial number plate for machines manufactured before 1974. On machines built after 1973, this number consists of 13 characters (Example: P826L 190001). The first letter indicates the family of machine. The next three characters indicate the model or machine designation. The letter in the fifth position indicates the model year. This is followed by a space, a six-digit serial number, and an "M" denoting Horicon as the factory manufacturer.

When ordering parts, use only the six-digit serial number. Use all 13 characters when filling out warranty claims.

A—Engine Serial Number
B—Engine Model Number

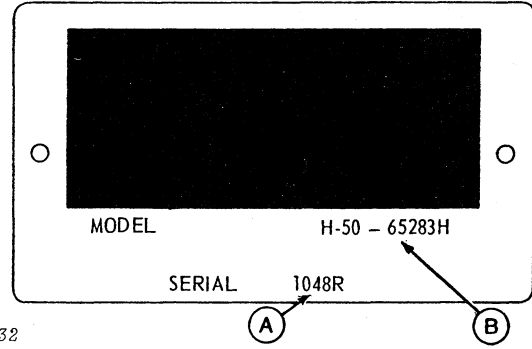


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Machine Identification

ENGINE SERIAL NUMBERS

The engine serial number on early model snow blowers is on a serial number plate on the blower housing or crankcase.



A—Engine Serial Number
B—Engine Model Number

M25932

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The engine serial number on later model snow blowers is stamped in the top of the engine blower housing.

Record the model and serial number on all warranty claims.

A
H50-65392K B
SER 4028D

A—Engine Model Number
B—Engine Serial Number

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ENGINE HORSEPOWER AND MODEL NUMBER

Snow Blower	Horsepower	Engine Model No.
526	(3.7 kw) 5	H50 Snow King
726	(5.2 kw) 7	H70 Snow King
732	(5.2 kw) 7	H70 Snow King
826	(6.0 kw) 8	H80 Snow King
832	(6.0 kw) 8	H80 Snow King
1032	(7.5 kw) 10	HM100 Snow King

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ENGINE HORSEPOWER AND MODEL NUMBER

Snow Blower	Horsepower	Engine Model No.
526	(3.7 kw) 5	H50 Snow King
726	(5.2 kw) 7	H70 Snow King
732	(5.2 kw) 7	H70 Snow King
826	(6.0 kw) 8	H80 Snow King
832	(6.0 kw) 8	H80 Snow King
1032	(7.5 kw) 10	HM100 Snow King

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ENGINE IDENTIFICATION

Engine Model Numbers	H50SK*	H70SK*	H80SK*	HMS100*
Manufacturer	Tecumseh	Tecumseh	Tecumseh	Tecumseh
Cylinders	one	one	one	one
Strokes/Cycle	four	four	four	four
Bore	(66.675 mm) 2-5/8 in.	(69.85 mm) 2-3/4 in.	(77.775 mm) 3-1/16 in.	(80.962 mm) 3-1/16 in.
Stroke	(57.15 mm) 2-1/4 in.	(64.287 mm) 2-17/32 in.	(64.287 mm) 2-17/32 in.	(64.287 mm) 2-17/32 in.
Displacement	(200 cc) 12.20 cu. in.	(246 cc) 15.00 cu. in.	(306 cc) 18.65 cu. in.	(331 cc) 20.20 cu. in.
Compression Release	Yes	Yes	Yes	Yes

**The letters SK signify "Snow King" winterized engines.*

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Specifications

MACHINE ENGINE MODEL NUMBERS

Machine	Engine Model	HP	Cubic Inch Displacement	Bore	Stroke
526 Walk-Behind Snow Blower	H50 Snow-King (Winterized)	5 (3.7 kW)	12.20 cu. in. 199.958 cc	2-5/8 in. 66.675 mm	2-1/4 in. 57.150 mm
726 and 732 Walk-Behind Snow Blower	H70 Snow-King (Winterized)	7 (5.2 kW)	18.65 cu. in. 305.673 cc	3-1/16 in. 77.774 mm	2-17/32 in. 64.287 mm
826 and 832 Walk-Behind Snow Blower	H80 Snow-King (Winterized)	8 (6.0 kW)	18.65 cu. in. 305.673 cc	3-1/16 in. 77.774 mm	2-17/32 in. 64.287 mm
1032 Walk-Behind Snow Blower	HM100 Snow-King (Winterized)	10 (7.5 kW)	20.20 cu. in. 331 cc	3-3/16 in. 80.9 mm	2-17/32 in. 64.287 mm

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TUNE-UP SPECIFICATIONS

Item	Specification
Breaker Point Gap	0.020 in. (0.508 mm)
Spark Plug Gap	0.030 in. (0.762 mm)
Timing Dimension (BTDC)	0.085 to 0.095 in. (2.159 to 2.413 mm)
Carburetor High Speed, No Load	3450 ± 150 rpm
Idle Speed, No Load	1400 to 1600 rpm
Float Setting	7/32 in. (5.556 mm)
Intake Valve Clearance (Cold)	0.010 in. (0.254 mm)
Exhaust Valve Clearance (Cold)	0.010 in. (0.254 mm)
Compression	70 to 100 psi (483 to 690 kPa)

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Specifications

ENGINE SPECIFICATIONS

Item	Engine Model			
	H50	H70	H80	HM100
Valve Guides, Standard	0.312-0.313 in. 7.924-7.950 mm	0.312-0.313 in. 7.924-7.950 mm	0.312-0.313 in. 7.924-7.950 mm	0.312-0.313 in. 7.924-7.950 mm
Valve Guides, 1/32-inch Oversize	0.343-0.344 in. 8.712-8.737 mm	0.343-0.344 in. 8.712-8.737 mm	0.343-0.344 in. 8.712-8.737 mm	0.343-0.344 in. 8.712-8.737 mm
Valve Guide Wear Tolerance	0.0015-0.0020 in. 0.038-0.050 mm	0.0015-0.0020 in. 0.038-0.050 mm	0.0015-0.0020 in. 0.038-0.050 mm	0.0015-0.0020 in. 0.038-0.050 mm
Valve Stem Diameter Intake, Standard	0.309-0.310 in. 7.848-7.874 mm	0.309-0.310 in. 7.848-7.874 mm	0.309-0.310 in. 7.848-7.874 mm	0.309-0.310 in. 7.848-7.874 mm
Intake, 1/32-Inch Oversize	0.340-0.341 in. 8.636-8.661 mm	0.340-0.341 in. 8.636-8.661 mm	0.340-0.341 in. 8.636-8.661 mm	0.340-0.341 in. 8.636-8.661 mm
Exhaust, Standard	0.308-0.309 in. 7.823-7.848 mm	0.308-0.309 in. 7.823-7.848 mm	0.308-0.309 in. 7.823-7.848 mm	0.308-0.309 in. 7.823-7.848 mm
Exhaust, 1/32-inch Oversize	0.339-0.340 in. 8.610-8.636 mm	0.339-0.340 in. 8.610-8.636 mm	0.339-0.340 in. 8.610-8.636 mm	0.339-0.340 in. 8.610-8.636 mm
Valve Spring Free Length	1-9/16 in. 39.690 mm	1-9/16 in. 39.690 mm	1-9/16 in. 39.690 mm	1.462 in. 37.084 mm
Valve Spring Compressed Length	45/64 in. 17.856 mm	45/64 in. 17.856 mm	45/64 in. 17.856 mm	45/64 in. 17.856 mm
Valve Spring Compressed Tension	48 lbs. 21.772 kg	48 lbs. 21.772 kg	48 lbs. 21.772 kg	48 lbs. 21.772 kg
Valve Spring Squareness	1/32-1/16 in. 0.787-1.574 mm	1/32-1/16 in. 0.787-1.574 mm	1/32-1/16 in. 0.787-1.574 mm	1/32-1/16 in. 0.787-1.574 mm
Valve Spring Squareness Tolerance	3/32 in. 2.387 mm	3/32 in. 2.387 mm	3/32 in. 2.387 mm	3/32 in. 2.387 mm
Valve Face Angle	45°	45°	45°	46°
Valve Seat Angle	45°	45°	45°	46°

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Specifications

ENGINE SPECIFICATIONS - Continued

Item	Engine Model			
	H50	H70	H80	HM100
Piston Diameter	2.6210-2.6215 in. 66.550-66.562 mm	2.7427-2.7442 in. 69.664-69.702 mm	3.0547-3.0562 in. 77.589-77.627 mm	3.1817-3.1842 in. 80.772-80.810 mm
Bore Diameter	2.6250-2.6260 in. 66.675-66.700 mm	2.7500-2.7510 in. 69.850-69.875 mm	3.0620-3.0630 in. 77.774-77.800 mm	3.187-3.188 in. 80.962-80.963 mm
Bore Wear Tolerance	0.005 in. 0.127 mm	0.005 in. 0.127 mm	0.005 in. 0.127 mm	0.005 in. 0.127 mm
Piston Skirt Clearance	0.0035-0.0050 in. 0.1140-0.152 mm	0.0045-0.0060 in. 0.114-0.152 mm	0.0050-0.0070 in. 0.127-0.177 mm	0.0028-0.0063 in. 0.0762-0.1524 mm
Piston Pin Diameter	0.6248-0.6250 in. 15.869-15.875 mm	0.6250-0.6254 in. 15.897-15.885 mm	0.6250-0.6254 in. 15.875-15.885 mm	0.6250-0.6254 in. 15.875-15.885 mm
Compression Ring Groove Width	0.0955-0.0975 in. 2.425-2.476 mm	0.0795-0.0805 in. 2.019-2.044 mm	0.0955-0.0975 in. 2.425-2.476 mm	0.0955-0.0975 in. 2.425-2.476 mm
Oil Ring Groove Width	0.1565-0.1585 in. 3.975-4.025 mm	0.1880-0.1890 in. 4.775-4.800 mm	0.188-0.190 in. 4.775-4.800 mm	0.188-0.190 in. 4.775-4.800 mm
Compression Ring Side Clearance	0.002 in. 0.050 mm	0.002 in. 0.050 mm	0.002 in. 0.050 mm	0.002 in. 0.050 mm
Oil Ring Side Clearance	0.0045 in. 0.114 mm	0.0010-0.0030 in. 0.025-0.276 mm	0.002-0.003 in. 0.025-0.076 mm	0.001-0.004 in. 0.0254-0.1016 mm
Ring End Cap	0.007-0.017 in. 0.177-0.431 mm	0.010-0.020 in. 0.254-0.508 mm	0.010-0.020 in. 0.254-0.508 mm	0.010-0.020 in. 0.254-0.508 mm
Crankshaft Conn. Rod Journ. Diameter	1.0630-1.0635 in. 26.981-26.996 mm	1.1865-1.1870 in. 30.137-30.149 mm	1.1865-1.1870 in. 30.137-30.149 mm	1.1880-1.1885 in. 30.155-30.165 mm

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Specifications

BOLT TORQUE CHART

Grade of Bolt		SAE-2	SAE-5	SAE-8	Socket or Wrench Size	
Min. Tensile Strength		64,000 PSI	105,000 PSI	150,000 PSI		
Grade Marking on Bolt						
U.S. Standard					U.S. Regular	
Bolt Dia.	U.S. Dec. Equiv.	TORQUE IN FOOT POUNDS			Bolt Head	Nut
1/4	0.250	(8.14 N-m) 6	(13.56 N-m) 10	(18.98 N-m) 14	7/16	7/16
5/16	0.3125	(17.63 N-m) 13	(27.12 N-m) 20	(40.68 N-m) 30	1/2	1/2
3/8	0.375	(31.19 N-m) 23	(47.46 N-m) 35	(67.80 N-m) 50	9/16	9/16
7/16	0.4375	(47.46 N-m) 35	(74.58 N-m) 55	(108.48 N-m) 80	5/8	11/16
1/2	0.500	(74.58 N-m) 55	(115.26 N-m) 85	(162.72 N-m) 120	3/4	3/4
9/16	0.5625	(101.70 N-m) 75	(176.28 N-m) 130	(237.30 N-m) 175	13/16	7/8
5/8	0.625	(142.38 N-m) 105	(230.52 N-m) 170	(325.44 N-m) 240	15/16	15/16
3/4	0.750	(250.86 N-m) 185	(406.80 N-m) 300	(576.30 N-m) 425	1-1/8	1-1/8
7/8	0.875	(216.96 N-m) 160	(616.98 N-m) 445	(928.86 N-m) 685	1-5/16	1-5/16
1	1.000	(339.00 N-m) 250	(908.52 N-m) 670	(1396.68 N-m) 1030	1-1/2	1-1/2

Multiply readings by 12 for inch-pound values.

* "B" Grade bolts larger than 3/4-inch (19.1 mm) are sometimes formed hot rather than cold, which accounts for the lower recommended torque.

NOTE: Allow a tolerance of plus or minus 10 per cent on all torques given in this chart.

SET SCREW SEATING TORQUE CHART

Screw Size	Cup Point	Square Head
Torque in Inch Pounds		
#5	(1.02 N-m) 9	—
#6	(1.02 N-m) 9	—
#8	(2.26 N-m) 20	—
#10	(3.73 N-m) 33	—
1/4	(9.83 N-m) 87	(23.96 N-m) 212
5/16	(18.65 N-m) 165	(47.46 N-m) 420
3/8	(32.77 N-m) 290	(93.79 N-m) 830
7/16	(48.59 N-m) 430	—
1/2	(70.06 N-m) 620	(237.30 N-m) 2100
9/16	(70.06 N-m) 620	—
5/8	(138.43 N-m) 1225	(480.25 N-m) 4250
3/4	(240.13 N-m) 2125	(870.10 N-m) 7700

Divide readings by 12 for foot-pound values

NOTE: Allow a tolerance of plus or minus 10 per cent on all torques given in this chart.

Specifications

FUEL

The fuel tank capacity for the 526 Snow Blower is (1.89 L) 2 quarts. The fuel tank capacity for the 726, 732, 826, 832 and 1032 Snow Blower is (3.79 L) 1 gallon.

Use fresh clean non-leaded, regular leaded or low-lead gasoline.

NOTE: Non-leaded gasoline is recommended; gasohol is not.

IMPORTANT: DO NOT use premium, white, or high-test gasoline, Never use special additives, such as carburetor cleaners, deicers, or moisture-removing liquids in the gasoline. Use clean gasoline containers.

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ENGINE CRANKCASE OIL

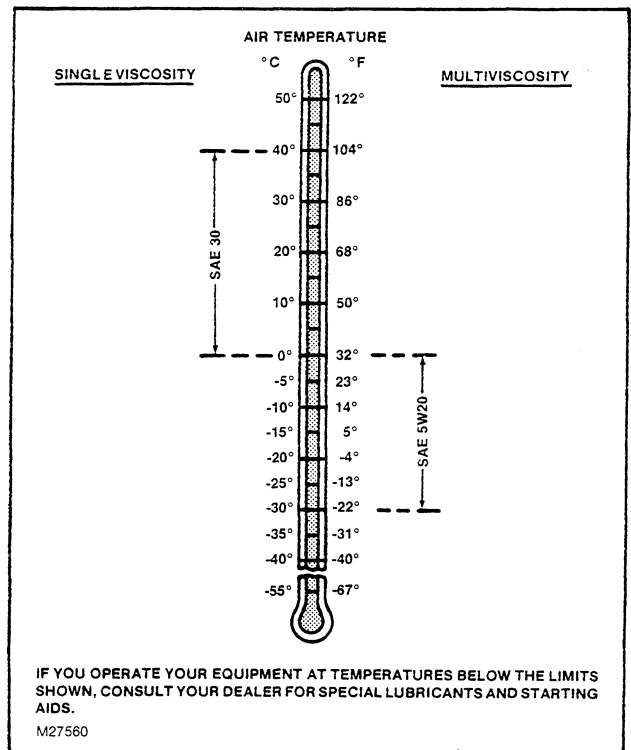
Engine crankcase oil capacity for the 526, 726 AND 732 Snow Blowers is approximately (0.56 L) 19 ounces or 1-1/4 pints. Engine crankcase oil capacity for 826, 832 and 1032 Snow Blowers is approximately (0.71 L) 24 ounces or 1-1/2 pints. Refer to oil temperature chart for recommended oil viscosity.

John Deere TORQ-GARD SUPREME® engine oil is recommended. If other oils are used, they must be premium quality engine oils meeting performance requirements of:

API Service Classification
MS-CC-SC-SD-SE-SF

Conditions in certain geographical areas may require the distribution of special service bulletins containing lubricant recommendations which supplement those printed in this manual. Consult your John Deere branch to obtain the latest information on alternative lubricant recommendations.

NOTE: Change engine oil every 25 hours of operation.



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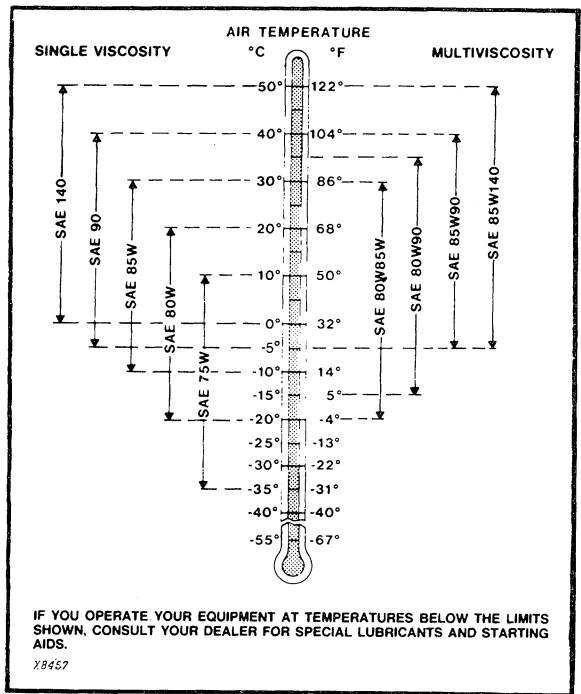
GEAR CASE OIL

John Deere API GL-5 Gear Oil is recommended. If other oils are used, they must meet performance requirements of:

API Service Classification
GL-5
Military Specification
MIL-L2105C

Conditions in certain geographical areas outside the United States and Canada may require different lubricant recommendations than those printed in this manual. Consult your John Deere branch to obtain alternative lubricant recommendations.

NOTE: Check gear case oil each year before starting seasonal operation.



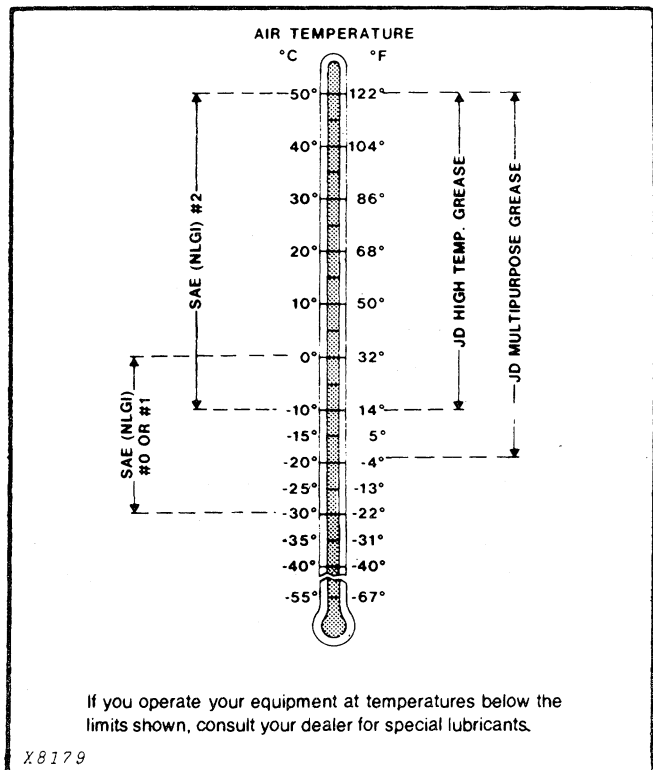
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GREASE

John Deere Multi-purpose Grease is recommended in all grease fittings. If other greases are used, use:

- SAE Multi-purpose Grease
- SAE Multi-purpose Grease containing 3 to 5 percent molybdenum disulfide

Conditions in certain geographical areas outside the United States and Canada may require different lubricant recommendations than those printed in this manual. Consult your John Deere branch to obtain alternative lubricant recommendations.



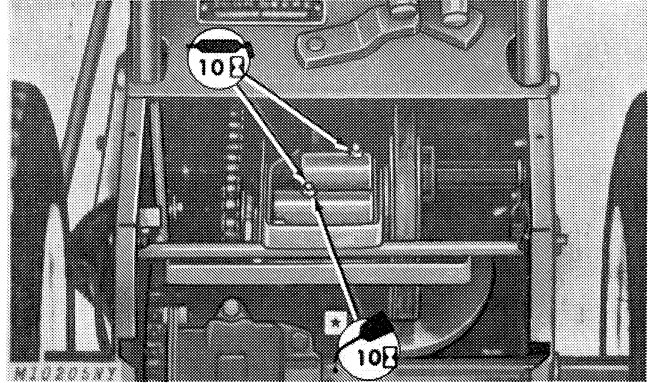
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GREASE FITTING LOCATIONS

Lubricate grease fittings every 10 hours of operation.

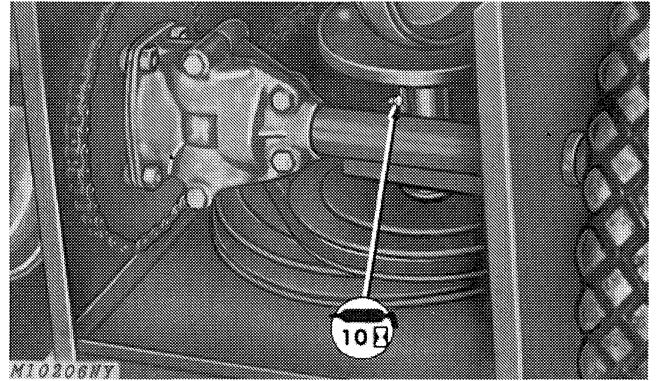
NOTE: Later model snow blowers had one oil hole and one grease fitting in transfer case. On these snow blowers, lubricate oil hole with several drops of SAE 30 engine oil.

Lubricate differential every 10 hours of operation.



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Lubricate fitting on traction drive shaft every 10 hours of operation.



0A8;M10206 NY M23;1015 F 080581

Section 20 ENGINE

CONTENTS

GROUP 05 - GENERAL INFORMATION

Description	05-1
Engine Analysis	05-1
Diagnosing Malfunctions	05-2

GROUP 10 - MINOR TUNE-UP

Change Oil	10-1
Check or Replace Spark Plug	10-1
Check or Replace Breaker Points	10-1
Time Engine	10-2
Install Flywheel	10-3
Install Cylinder Head and Blower Housing	10-4
Check Governor Linkage	10-4
Check Throttle Adjustment	10-4
Adjust Carburetor on 526, 726 and 732 Snow Blowers Below Serial No. 55001	10-5
Adjust Carburetor on 832 Snow Blowers Blow Serial No. 70001	10-6
Adjust Carburetor on 726, 826, 832 and 1032 Snow Blowers Above Serial No. 70001	10-7
Adjust Throttle Cable	10-8

GROUP 15 - CYLINDER HEAD, VALVES AND BREATHER

General Information	15-1
Disassembly	15-1
Inspect Cylinder Head	15-2
Inspect Breather	15-3
Inspect Valve Springs	15-4
Inspect Valves	15-5
Inspect Valve Seats	15-5
Recondition Valve Guides	15-5
Ream Valve Guides	15-6
Recondition Valve Seats	15-6
Lap Valves	15-7
Check Valve-to-Tappet Clearance	15-7
Assembly	15-8

GROUP 20 - INTERNAL COMPONENTS

General Information	20-1
Compression Release Camshafts	20-2
Engine Overhaul	20-3
Remove Cylinder Head	20-3
Remove Flywheel	20-3

GROUP 20 - INTERNAL COMPONENTS - Continued

Remove Magneto Assembly	20-4
Remove Cylinder Cover	20-4
Remove Camshaft and Tappets	20-5
Remove Crankshaft	20-5
Remove Governor Rod	20-6
Remove Governor Gear	20-6
Remove Piston Rings	20-6
Remove Connecting Rod	20-7
Inspect Camshaft and Governor Assembly	20-7
Exploded View of Crankshaft, Connecting Rod and Piston	20-8
Inspect Piston	20-9
Inspect Crankshaft and Connecting Rod	20-11
Inspect Camshaft	20-12
Inspect Governor Gear and Spool	20-12
Inspect Governor Rod	20-12
Inspect Governor Shaft	20-13
Inspect Crankshaft and Camshaft Bearings	20-13
Inspect Block	20-14
Deglaze Cylinder Bore	20-15
Boring Cylinder Block	20-16
Replace Oil Seals	20-17
Assemble Connecting Rod and Piston	20-18
Check Ring End Gap	20-18
Install Rings	20-19
Install Crankshaft	20-19
Install Connecting Rod and Piston	20-20
Attach Connecting Rod on Early Model H50 Engines	20-20
Attach Connecting Rod on Late Model Engines	20-21
Install Camshaft and Tappets	20-21
Install Governor Rod and Lever	20-22
Install Governor Shaft	20-22
Install Governor Gear and Spool	20-22
Install Cylinder Cover	20-23
Install Magneto	20-23
Install Flywheel	20-24
Install Cylinder Head	20-24
Install Governor Linkage	20-25
Adjust Governor	20-25
Adjust Throttle Cable	20-26



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CONTENTS - Continued

GROUP 30 - RECOIL STARTER

Remove H50 and H70 Engine Recoil Rope Starter	30-1
Disassemble H50 and H70 Engine Recoil Rope Starter	30-1
Assemble H50 and H70 Engine Recoil Rope Starter	30-2
Remove and Disassemble H80 and HM100 Engine Recoil Rope Starter	30-3
Assemble and Install H80 and HM100 Engine Recoil Rope Starter	30-4

GROUP 40 - SPECIFICATIONS

Torque Specifications	40-1
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