

TECUMSEH

Basic

Troubleshooting and Service Information



ENGINES & TRANSMISSIONS



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The information in this guide is intended to assist individuals who are knowledgeable in basic engine repair and maintenance. If you are unfamiliar with two and four cycle engine operation and maintenance, DO NOT attempt any maintenance or repairs. Contact your local Tecumseh Servicing Dealer for assistance.

IMPORTANT NOTICE!

Safety Definitions

Statements in this manual preceded by the following words and graphics are of special significance:



WARNING

Or



WARNING

WARNING indicates a potentially hazardous situation which if not avoided, could result in death or serious injury.

NOTE

Refers to important information and is placed in italic type.

It is recommended that you take special notice of all items discussed on the next two pages and wear the appropriate safety equipment.

Before operating an engine *it is your responsibility* to read the Operator's Manual. Follow these basic rules for your personal safety:

- Keep this manual handy at all times for future reference.
- Read it carefully and familiarize yourself with operating, maintenance, components and safety instructions.

Notice Regarding Emissions

Engines which are certified to comply with California and U.S. EPA emission regulations for SORE (Small Off Road Equipment), are certified to operate on regular unleaded gasoline, and may include the following emission control systems: (EM) Engine Modification and (TWC) Three-Way Catalyst (if so equipped).

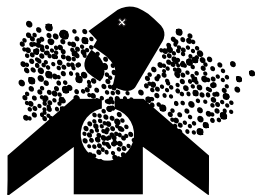
Tecumseh Contact Information

For engine adjustments, repairs or warranty service, contact your nearest Authorized Tecumseh Servicing Dealer. Find them on our website at www.TecumsehPower.com or call Tecumseh Power Company at 1-800-558-5402 or 262-377-2700 if you are located outside the U.S.

General Safety Precautions

A. Avoid Carbon Monoxide Poisoning

All engine exhaust contains carbon monoxide, a deadly gas. Breathing carbon monoxide can cause headaches, dizziness, drowsiness, nausea, confusion and eventually death.



Carbon monoxide is a colorless, odorless, tasteless gas which may be present even if you do not see or smell any engine exhaust. Deadly levels of carbon monoxide can collect rapidly and you can quickly be overcome and unable to save yourself. Also, deadly levels of carbon monoxide can linger for hours or days in enclosed or poorly-ventilated areas. If you experience any symptoms of carbon monoxide poisoning, leave the area immediately, get fresh air, and **SEEK MEDICAL TREATMENT**.

To prevent serious injury or death from carbon monoxide:

- NEVER run engine indoors. Even if you try to ventilate engine exhaust with fans or open windows and doors, carbon monoxide can rapidly reach dangerous levels.
- NEVER run engine in poorly-ventilated or partially enclosed areas such as barns, garages, basements, carports, under dwellings, or in pits.
- NEVER run engine outdoors where engine exhaust can be drawn into a building through openings such as windows and doors.

B. Avoid Gasoline Fires

Gasoline (fuel) vapors are highly flammable and can explode. Fuel vapors can spread and be ignited by a spark or flame many feet away from engine. To prevent injury or death from fuel fires, follow these instructions:



- NEVER store engine with fuel in fuel tank inside a building with potential sources of ignition such as hot water and space heaters, clothes dryers, electric motors, etc.
- NEVER remove fuel cap or add fuel when engine is running.
- NEVER start or operate the engine with fuel fill cap removed.
- Allow engine to cool before refueling.
- NEVER fill fuel tank indoors. Fill fuel tank outdoors in a well-ventilated area.
- DO NOT smoke while refueling tank.

- Use only an approved red GASOLINE container to store and dispense fuel. Tecumseh recommends purchasing gasoline in containers with a capacity of 2.5 gallons or less. Small containers are easier to handle and help eliminate spillage during refueling.
- DO NOT pour fuel from engine or siphon fuel by mouth.

C. Adult Supervision of Operation, Refueling and Maintenance

Not everyone who is allowed to use an engine is capable of safely and responsibly operating, maintaining and/or fueling it. Tecumseh recommends the following:

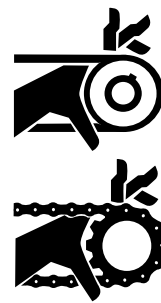
- An adult should fuel the engine. NEVER allow children to refuel an engine.
- An adult should perform maintenance on an engine. Only allow children to perform maintenance if an adult has determined they are experienced and capable of such operation.
- An adult should start the engine. Only allow children to start the engine if an adult has determined they are experienced and capable of such operation.

To avoid unsupervised operation of the engine, especially by children, NEVER leave it unattended when it is running.

D. Stay Away from Rotating Parts

NEVER operate an engine with an unguarded engine shaft.

The equipment manufacturer may attach a sprocket and chain or pulley and belt to the engine shaft. If these parts are not properly guarded, or if you are not sure whether they are properly guarded, DO NOT use your engine; contact the equipment manufacturer. Hands, feet, hair, jewelry, clothing, etc. can become entangled in rotating parts, leading to serious injury or death. To avoid serious injury or death, be sure the flywheel guard is in place.



General Information

The following information is being provided to assist you in locating and recording your engine model and specification numbers. This information will be needed to use this book or obtain parts from a local Tecumseh dealer.

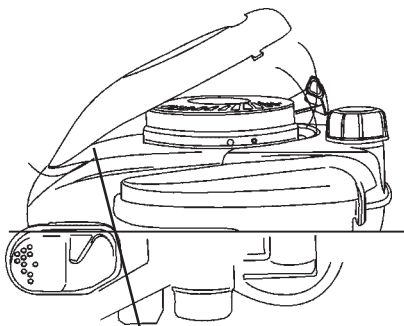
Model Numbering System for Tecumseh's Full Engine Line 2004 Production and Later

LOCATING AND READING ENGINE MODEL AND SPECIFICATION
THE FOLLOWING WILL BE NEEDED TO LOCATE PARTS FOR YOUR ENGINE.

	Model	Specification	(DOM)
ENGINE:	TVM195	150288G	8150C

ENGINE MODEL	SPEC NO.	D.O.M
TVM195	150288G	8150C

Typical Engine I.D. Label

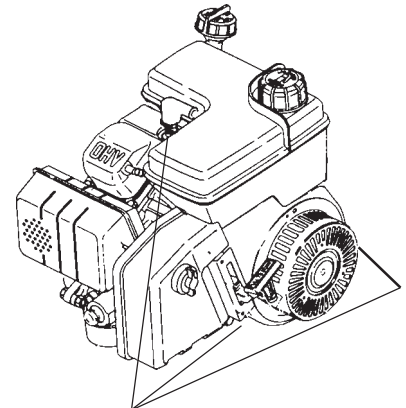


ENGINE MODEL NUMBER LOCATED UNDER COVER

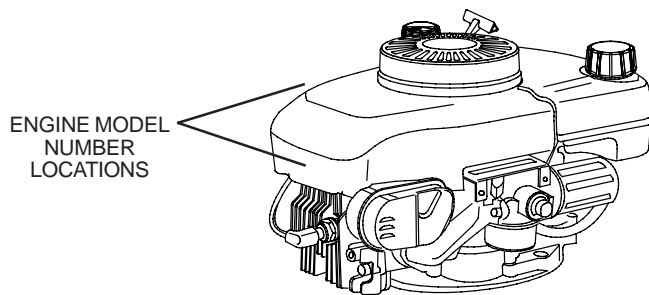
IMPORTANT ENGINE INFORMATION
TECUMSEH POWER COMPANY
 THIS ENGINE MEETS 1995-1998 CALIF/US EPA PH1 APPLICABLE EMISSION REGULATIONS FOR ULGE ENGINES FUEL REGULAR UNLEADED OIL SAE 30

ENGINE MODEL	TVM195 150288G (E)
ENGINE FAMILY	STP318U1G2EA
DISPLACEMENT	318 D.O.M. 8150 C (S E R)

CAUTION FOR PERSONAL PROTECTION REFER TO OWNER'S MANUAL FOR IMPORTANT SAFETY AND MAINTENANCE INFORMATION



ENGINE MODEL NUMBER LOCATIONS



ENGINE MODEL NUMBER LOCATIONS

Model Numbering System for Tecumseh's Full Engine Line 2004 Production and Later

Reviewing The Engine ID Label

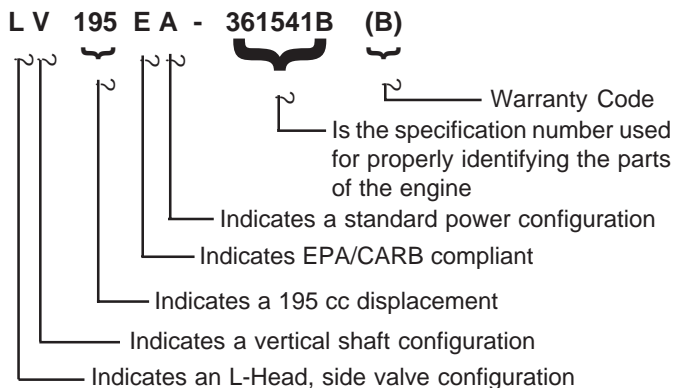
Effective with the 2004 Model Year, we have changes to the engine I.D. label on our products. The following pages will explain the information contained on the label dependent on the age of your product.

Specification Number

The numbers following the model number make up the specification number.

Using model **LV195EA-361541B**, as an example, interpretation is as follows:

LV195EA-361541B is the model and specification number.

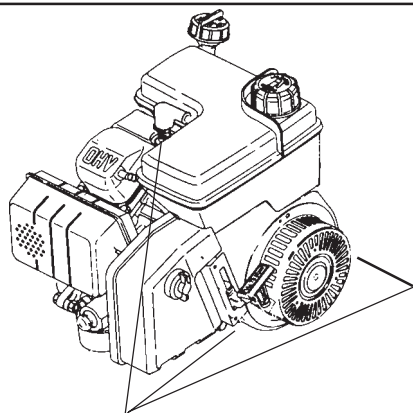


Date of Manufacture

The Date of Manufacture (D.O.M.) indicates the production date.

For this example, **03188BC0010** is the D.O.M. (Date of Manufacture).

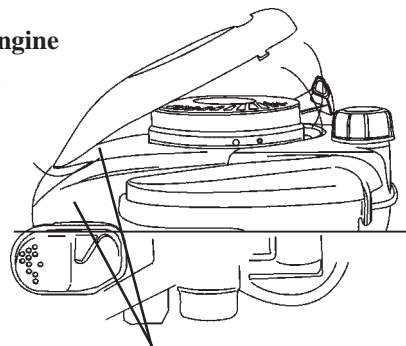
Year	Day of Year	Mfg Facility	Assembly Line / Shift	Individual Serial #
2003	188th	B	C	10th unit built
03	188	B	C	0010



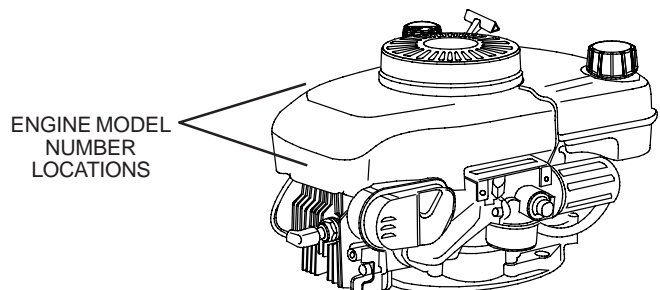
ENGINE MODEL NUMBER LOCATIONS



Typical Engine I.D. Label Locations



ENGINE MODEL NUMBER LOCATED UNDER COVER



ENGINE MODEL NUMBER LOCATIONS

Model Numbering System for Tecumseh's Full Engine Line 2004 Production and Later

CODE
1st Space - Valve Orientation
T = Two Cycle
O = Overhead Valve
L = L-Head
2nd Space - Crank Orientation
V = Vertical
H = Horizontal
M = Multi-position
3rd, 4th and 5th Space - Displacement in cc
6th Space - Emissions Class
E = 50 State/Global Emissions Compliant
X = Not for sale in California, except exempt applications
S = Snow Emission Compliant
7th Space - Engine Specifics
A = Standard
P = Powered Up

Model Conversion Chart			
4-Cycle			
LEV90	- LV148EA	OHH60	- OH195EA
LEV120	- LV195EA	OHH65	- OH195EP
HSSK50	- LH195SA	OHSK70	- OH195SA
HSSK55	- LH195SP	OHSK75	- OH195SP
VSK90	- LV148SA	HMSK90	- LH318SA
OHV135	- OV358EA	HMSK110	- LH358SA
OHV180	- OV490EA	OHSK110	- OH318SA
TVT691	- OV691EA	OHSK130	- OH358SA
VTX691	- OV691EP	OHM110	- OH318EA
2-Cycle			
TC300	- TM049XA		
HSK870	- TH139SP		
HSK600	- TH098SA		
AV520	- TV085XA		

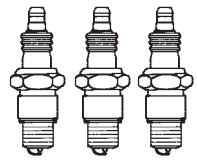
4-Cycle Quick Reference - Model Letter Designation

ECH - Exclusive Craftsman Horizontal
 ECV - Exclusive Craftsman Vertical
 H - Horizontal Shaft
 HH - Horizontal Heavy Duty (Cast Iron)
 HHM - Horizontal Heavy Duty (Cast Iron) (Medium Frame)
 HM - Horizontal Medium Frame
 HMSK - Horizontal Medium Frame (Snow King)
 HMXL - Horizontal Medium Frame (Extra Life)
 HS - Horizontal Small Frame
 HSSK - Horizontal Small Frame (Snow King)
 HXL - Horizontal (Extra Life)
 LAV - Lightweight Aluminum Frame Vertical
 LEV - Low Emissions Vertical
 OH - Overhead Valve Heavy Duty (Cast Iron)
 OHH - Overhead Valve Horizontal
 OHM - Overhead Valve Heavy Duty Horizontal (Medium Frame)
 OHS - Overhead Valve Horizontal (Snow King)
 OHV - Overhead Valve Vertical (Medium Frame)

OVM - Overhead Valve Vertical (Medium Frame)
 OVRM - Overhead Valve Vertical (Small Frame) (Rotary Mower)
 OVXL - Overhead Valve Vertical (Medium Frame) (Extra Life)
 TNT - Toro 'N' Tecumseh (Toro Exclusive Series)
 TVEM - Tecumseh Vertical European Model
 TVM - Tecumseh Vertical (Medium Frame) (Replaces V & VM)
 TVS - Tecumseh Vertical Styled
 TVT - Tecumseh Vertical Twin
 TVXL - Tecumseh Vertical (Extra Life)
 V - Vertical Shaft
 VH - Vertical Heavy Duty (Cast Iron)
 VLV - Vector Lightweight Vertical
 VLXL - Vector Lightweight Vertical (Extra Life)
 VM - Vertical Shaft (Medium Frame)
 VSK - Vertical Snow King
 VTX - Vertical Twin



Spark Plug Replacement



NOTE: Only models which will continue to be manufactured long term will have an updated Model designation.

4-CYCLE SPARK PLUG

Service Number 35395

RJ19LM

ECV100-120
 HMSK70, LH318SA (HMSK80), HMSK90
 HSK30-70
 HSSK40, LH195SA (HSSK50), LH195SP (HSSK55)
 LH358SA (HMSK100), HMSK110
 LEV80, LV148EA (LEV90), LV195EA (LEV120)
 LV148SA (VSK90), VSK100
 TNT100
 TNT120
 TVS75-120
 TVXL90-120

Service Number 34645

RN4C

OH318EA (OHM90-110)
 † OHM120
 OH195EA (OHH60), OH195EP (OHH65)
 OHH/OHSK40-130
 OH195SA (OHSK70), OH195SP (OHSK75)
 ‡ OH318SA (OHSK110), OH358SA (OHSK120-130)
 OH180
 OV195EA
 OV358EA (OHV110-135), OV490EA (OHV140-180)
 OV691EP (VTX691, TVT691)
 OVM120
 * OVXL120
 * OVXL/C120
 * OVXL125

Note:

* OVXL models with specification nos. below 202700 use RL86C.

† OHM120 models with specification nos. below 224000 use RL86C.

‡ OH318SA (OHSK110), OH358SA (OHSK120-130) models with specification nos. below 223000 use RL86C.

Service Number 34046

RL86C

† OHM120
 ‡ OH318SA (OHSK110), OH358SA (OHSK120-130)
 OVM120
 * OVXL120
 * OVXL/C120
 * OVXL125

Note:

* OVXL models with specification nos. 202700, 203000 and up, use RN4C.

† OHM120 models with specification nos. 224000 and up, use RN4C.

‡ OHSK110, OHSK120-130 models with specification nos. 223000 and up, use RN4C.

Service Number 33636

RJ17LM

H30-80
 HM70-100
 HS40-50
 TVM195-220
 TVXL195-220
 VLV-all

Service Number 35552

RL82C

HH140-160
 OH120-160

Service Number 34277

RJ8C

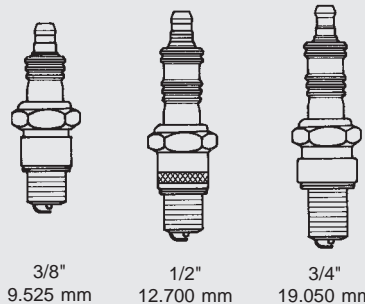
H22
 H25
 HH40-120
 HHM80
 HMXL70
 HT30
 HT35
 HXL35
 LAV25-50
 TVM125-170
 V40-80
 VH40-100
 VM70-100

NOTE: THE SERVICE NUMBERS LISTED BELOW WILL GIVE CORRESPONDING CHAMPION AND AUTOLITE SUBSTITUTIONS.

	Champion	Autolite
35395	- RJ-19LM	458
37598	- RJ-19LM4	458
35552	- RL-82C	4092
34046	- RL-86C	425
34645	- RN-4C	403
37599	- RN-4C4	403
33636	- RJ-17LM	245
34277	- RJ-8C	304

*NON CANADIAN APPLICATION

SPARK PLUG AIR GAP ON ALL MODELS IS .030 (.762 mm)



NOTE:

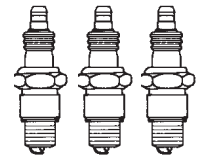
Not all spark plugs have the same heat range or reach. Using an incorrect spark plug can cause severe engine damage or poor performance. Tecumseh uses all three of the reaches shown.

FOR TWO CYCLE INFORMATION REFER TO NEXT PAGE.

Note: If you need assistance locating your engine model numbers please check page 3 or 4.



Spark Plug Replacement



NOTE: Only models which will continue to be manufactured long term will have an updated Model designation.

2-CYCLE SPARK PLUG

Service Number 611100 RCJ6Y TC300 TCH300 TM049XA	Service Number 33636 RJ17LM AV600 TVS600 AV520 TV085XA	Service Number 35395 RJ19LM TVS840 TVXL840	Service Number 611049 RCJ8Y AH520 HSK600 AH600 HSK635 HSK840 TH139SA HXL840 HSK845, 850 TC200 TH139SP TCH200 Type 1500 HSK870 TH098SA
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EUROPA MODELS

4-CYCLE SPARK PLUG

Service Number 33636 RJ17LM All Horizontal Models LAV BV Legend BVL Premier 153/173 BVS Prisma Centura Spectra Futura Synergy HTL Vantage	Service Number 34645 RN4C Centrua OHV Geotec OHV Synergy OHV Futura OHV Premier 45/55
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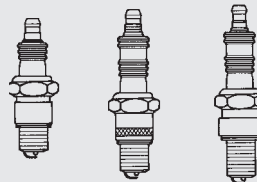
2-CYCLE SPARK PLUG	
Service Number 33636	
RJ17LM	
AV85/125	MV100S
AV520/600	TVS600

NOTE: THE SERVICE NUMBERS LISTED BELOW WILL GIVE CORRESPONDING CHAMPION AND AUTOLITE SUBSTITUTIONS.

	Champion	Autolite
35395 -	RJ-19LM	458
33636 -	RJ-17LM	245
611100 -	RCJ-6Y	2974
611049 -	RCJ-8Y	2976

*NON CANADIAN APPLICATION

SPARK PLUG AIR GAP ON ALL MODELS IS .030 (.762 mm)



3/8" 1/2" 3/4"
 9.525 mm 12.700 mm 19.050 mm

NOTE: Not all spark plugs have the same heat range or reach. Using an incorrect spark plug can cause severe engine damage or poor performance. Tecumseh uses all three of the reaches shown.

Note: If you need assistance locating your engine model numbers please check page 3 or 4.

Fuel Recommendations

Today's fuels have a short shelf life and it is recommended you buy no more than a two week supply at a time.

GASOLINE

Tecumseh Power Company strongly recommends the use of fresh, clean, unleaded regular gasoline in all Tecumseh engines. Unleaded gasoline burns cleaner, extends engine life, and promotes good starting by reducing the build-up of combustion chamber deposits. Leaded gasoline, gasohol containing no more than **10%** ethanol, premium gasoline, or unleaded gasoline containing no more than **15%** MTBE (Methyl Tertiary Butyl Ether), **15%** ETBE (Ethyl Tertiary Butyl Ether) **or 10%** ethanol, can be used if unleaded regular gasoline is not available.


Reformulated gasoline that is now required in several areas of the United States is also acceptable.

NEVER USE gasoline, fuel conditioners, additives or stabilizers containing methanol, gasohol containing more than 10% ethanol, unleaded regular gasoline containing more than 15% MTBE (Methyl Tertiary Butyl Ether), 15% ETBE (Ethyl Tertiary Butyl Ether) or 10% ethanol, gasoline additives, or white gas because engine/fuel system damage could result.

SPECIALTY FUELS

Fuels being marketed for use on small engines can have a significant effect on starting and engine performance. Prior to using any specialty fuel, the Reid Vapor Pressure (RVP) must be determined. Fuels with a rating of less than 50kPa (7psi) should not be used in summer, and fuel with a rating of 85kPa (12psi) should not be used during winter.

SHORT TERM STORAGE

 **WARNING** NEVER store the engine with fuel in the fuel tank inside a building with potential sources of ignition such as hot water and space heaters, clothes dryers, electric motors, etc.

If engine fuel stored in the gas tank and/or an approved gas container is to be unused without gasoline stabilizer for more than 15-30 days, prepare it for short term/seasonal storage.

Tecumseh recommends using **ULTRA-FRESH™** or Fuel Saver Plus Gasoline Stabilizer plus Fuel System Cleaner as an acceptable method of minimizing formation of fuel gum deposits during storage. This product is available from your Authorized Tecumseh Servicing Dealer.

Always follow mix ratio found on stabilizer container. Failure to do so may result in equipment damage.

It is not necessary to drain stabilized gas from carburetor.

FUEL TREATMENT

1. Add fuel stabilizer according to manufacturer's instructions.
2. Run engine at least 10 minutes after adding stabilizer to allow it to reach carburetor.
3. Instead of using a fuel preservative/stabilizer, you can empty the fuel tank as described under "Extended Storage".

Fuel Recommendations - *continued*

EXTENDED STORAGE

NOTES

Clean debris from engine before draining fuel from carburetor. If you have prepared your fuel for short term storage it is not necessary to drain fuel that contains stabilizer from your carburetor.

To avoid severe injury or death, DO NOT pour fuel from engine or siphon fuel by mouth.

1. To prevent serious injury from fuel fires, empty fuel tank by running engine until it stops from lack of fuel. DO NOT attempt to pour fuel from engine.
2. Run the engine while waiting until the remaining fuel is consumed.

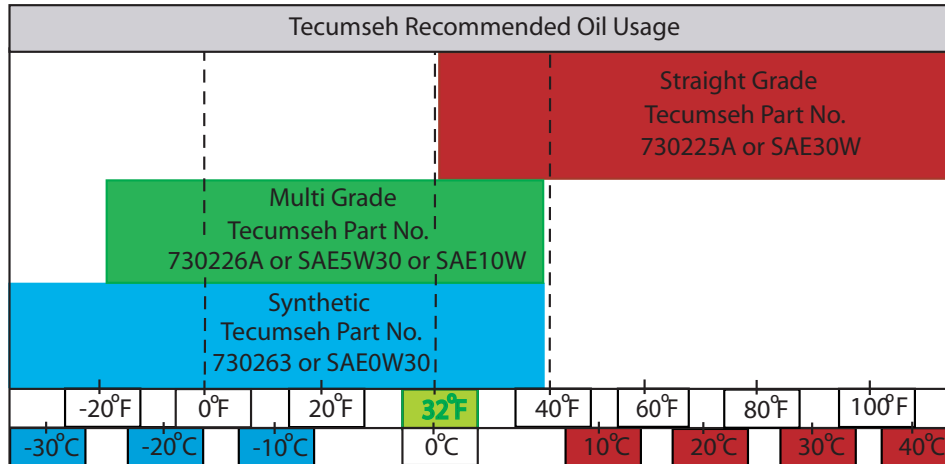
NEVER leave the engine unattended when it is running and NEVER run engine in enclosed areas.

FUEL ADDITIVES

Only fuel additives such as Tecumseh's fuel stabilizer Part No. 730245A or liquid varieties can be used when mixed properly. For winter applications, Isopropyl alcohol fuel dryers may be used in the fuel system but must be mixed at the proper ratio recommended by the manufacturer. **NEVER USE METHANOL BASED FUEL DRYERS.**

Tecumseh 4-Cycle Lubrication Requirements

Tecumseh recommends the use of a high quality, brand name oil with a minimum classification of SL/SJ. Very few air cooled engines have any type of oil filtration system, making regular oil changes critical to remove impurities from the engine and maximize engine life. **Consult the operator's or repair manual for the oil change interval and viscosity based on equipment operating temperature.**



TECUMSEH 4-CYCLE ENGINE OIL

shown with model names prior to 2004

CLASSIFICATIONS: "SL/SJ"

DO NOT USE 10W40

CAPACITIES:

Engine Model	ml	Oz.
All LAV, TVS, LEV, OVRM	630	21
ECV, TNT	630	21
V & VH50-70	810	27
TVM 125, 140	810	27
TVM 170-220	960	32
VM70-100, HHM80	960	32
VH100	1500	50
All VLV	810	27
VSK90-100	630	21
OVM120, OVXL120, 125	960	32
OHV11-13 without filter	960	32
OHV11-13 with filter	1170	39
OHV13.5-17 with filter	1800	61
OHV13.5-17 without filter	1650	55
TVT691 with filter	2150	71
TVT691 without filter	1950	64
H, HSK30-35	630	21
HS, HSSK40-50	630	21
H, HH, HSK50-70	570	19
OHH/OHSK50-70	630	21
HMSK, HM70-100	720	26
OHSK80-100	720	26
OHM120, OHSK110*-130	840	28
HH100,120, OH120-180	1560	52

*NOTE: Model OHSK110 with a spec. of 221000 and up, have a capacity of 26 oz. (720 ml.)

TECUMSEH 4-CYCLE ENGINE OIL

shown with model names 2004 production and later

Engine Model	ml	Oz.
LH195SA, LH195SP	630	21
LH318SA, LH358SA	720	26
LV148EA, LV148SA	630	21
LV195EA	630	21
OH195EA, OH195EP	630	21
OH195SA, OH195SP	630	21
OH318EA	720	26
OH358SA	840	28
OV195EA	630	21
OV358EA With Filter	1170	39
OV358EA Without Filter	960	32
OV490EA With Filter	1800	61
OV490EA Without Filter	1650	55
OV691EA With Filter	2150	71
OV691EA Without Filter	1950	64
OV691EP With Filter	2150	71
OV691EP Without Filter	1950	64

EUROPA MODELS *

VERTICALS

	ml	Oz.
Vantage	630	21
Prisma	630	21
Synergy	630	21
Synergy "55"	810	27
Spectra	630	21
Futura	630	21
HTL	630	21
BVS	630	21

HORIZONTALS

BH Series	630	21
Geotec Series 35-50	630	21

NOTE: Vertical shaft engines with auxiliary PTO:
26 oz. / 700 ml

4-Cycle Troubleshooting

The following is provided as a basic troubleshooting guide. Its use requires a complete review of all conditions and symptoms. Always examine the exterior for clues: leaks, excessive dirt, or obvious damage. Some repairs will require the assistance of a Tecumseh Servicing Dealer.

Preparation

Before troubleshooting any system problem, see original equipment manufacturer's (O.E.M.) instructions.

Make your troubleshooting easier by preparing as follows:

- Work in a clean, well-lighted place.
- Keep proper tools and materials nearby.
- Keep an adequate supply of clean petroleum-based solvent.



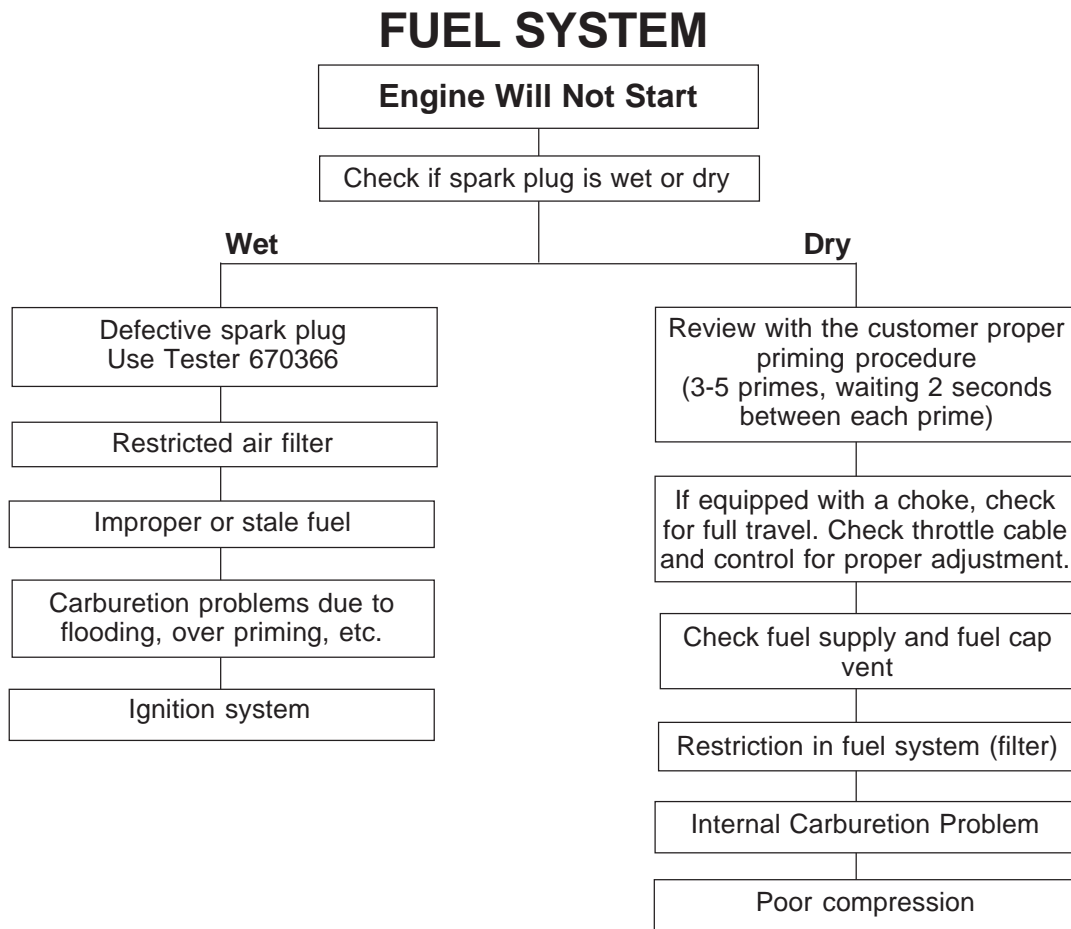
WARNING

To reduce the risk of serious injury or death from fires and/or explosions, NEVER use flammable solvents (e.g., gasoline) to clean serviceable parts. Use a water-based, non-flammable solvent such as Tecumseh Degreaser Cleaner.

CAUTION

NEVER use compressed air to clean debris from yourself or your clothing. When using compressed air to clean or dry serviceable parts:

- Wear appropriate eye protection.
- Use only approved air blow nozzles.
- Air pressure must not exceed 30psi (206kPa).
- Shield yourself and bystanders from flying debris.



Should more extensive repair be needed, we recommend you contact a local Tecumseh Servicing Dealer for repair. Repair manuals are also available from your local dealer or direct from Tecumseh. A complete list of the available manuals can be found at the end of this book.

NOTE: Refer to Technician's Handbook for a more detailed list of remedies.

4-Cycle Troubleshooting - *continued*



WARNING

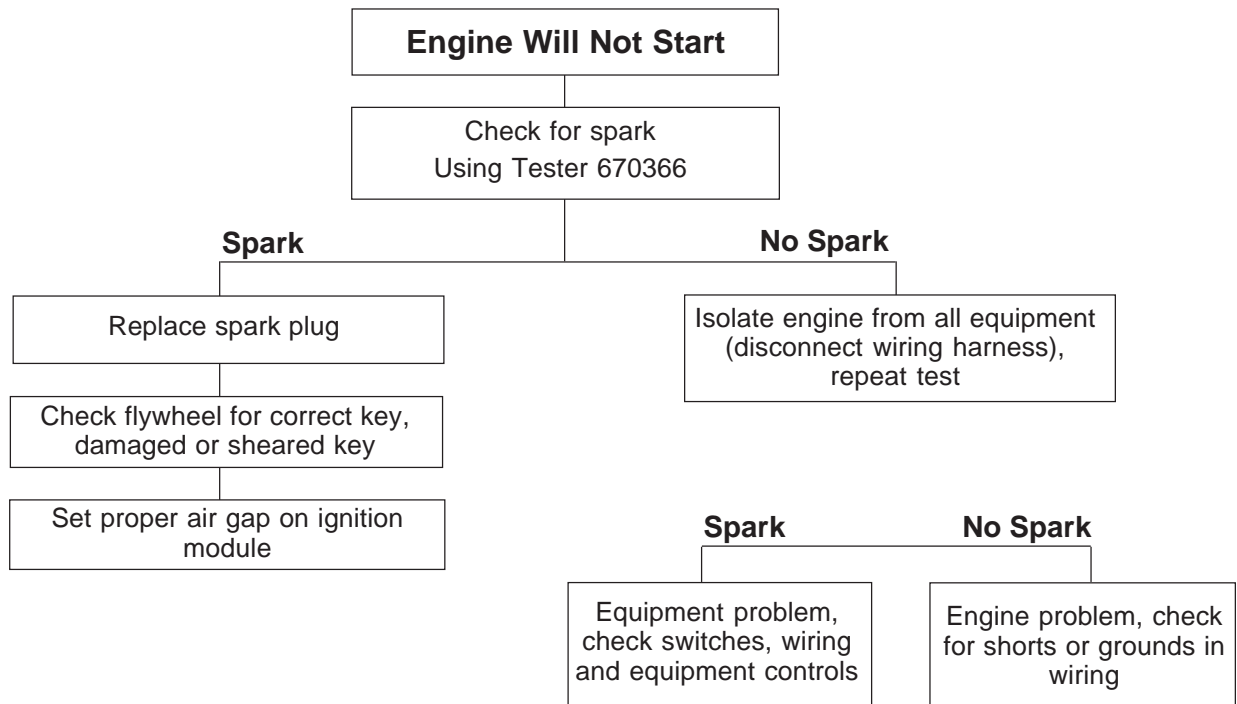
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CAUTION

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- Wear appropriate eye protection.
- Use only approved air blow nozzles.
- Air pressure must not exceed 30psi (206kPa).
- Shield yourself and bystanders from flying debris.

IGNITION SYSTEM



Should more extensive repair be needed, we recommend you contact a local Tecumseh Servicing Dealer for repair. Repair manuals are also available from your local dealer or direct from Tecumseh. A complete list of the available manuals can be found at the end of this book.

Tecumseh 2-Cycle Engine Oil Requirements

The proper type and ratio of 2-cycle oil is critical to long life and low maintenance of the engine. The use of non-certified oils and improper mix ratio's can cause severe engine damage and possibly void warranty consideration.

The following is a list of 2-cycle engine oil classifications which are certified for use in Tecumseh 2-cycle engines:

- National Marine Manufacturers Association, (NMMA), TC-WII or TC-W3
- American Petroleum Institute, (API), TC
- Japanese Automobile Standard Organization, (JASO), FB or FC

TWO-CYCLE FUEL/OIL MIX RATIOS		
24:1	32:1	50:1
AV520 Types 670 & 653 TV085XA (AV600 Type 600-10 & Up) TC200, TCH200, TCH300 TM049XA (TC300) MV100S	TVS600 All Types AH600	TVS / TVXL HSK840 - 870 HSK600 - 635

Sears/Craftsman 40:1 2-cycle Oil has been tested and approved for use in all engines, EXCEPT the TC / TM Models which require a 24:1 Ratio.

2-CYCLE SYNTHETIC BLEND

ENGINE OIL WITH FUEL STABILIZER

PART NO. 730227C

TECUMSEH 2-CYCLE ENGINE OIL may be used in a variety of 2-cycle engines including: outboards, lawnmowers, snow-blower, string trimmers, and edgers at any fuel/oil mixing ratio up to 50:1.

- MIXES EASY
DOES NOT SEPARATE
- PREMIUM BLEND FOR BOTH AIR AND WATER COOLED ENGINES
ENSURES CYLINDER WALL LUBRICATION

ENGINE FUEL MIX				
	U.S. Gasoline	U.S. Amount of Oil To Be Added	METRIC Petrol	METRIC Amount of Oil To Be Added
24:1	1 Gallon	5 oz.	4 Liters	167 ml
	2 Gallons	11 oz.	8 Liters	333 ml
	5 Gallons	27 oz.	20 Liters	833 ml
32:1	1 Gallon	4 oz.	4 Liters	125 ml
	2 Gallons	8 oz.	8 Liters	250 ml
	5 Gallons	20 oz.	20 Liters	625 ml
50:1	1 Gallon	2.5 oz.	4 Liters	80 ml
	2 Gallons	5 oz.	8 Liters	160 ml
	5 Gallons	13 oz.	20 Liters	400 ml

2-Cycle Troubleshooting

The following is provided as a basic troubleshooting guide to any piece of equipment. Its use requires a complete review of all conditions and symptoms. Always examine the exterior for clues: leaks, excessive dirt, or obvious damage. Some repairs will require the assistance of a Tecumseh Servicing Dealer.

Preparation

Before troubleshooting any system problem, see original equipment manufacturer's (O.E.M.) instructions.

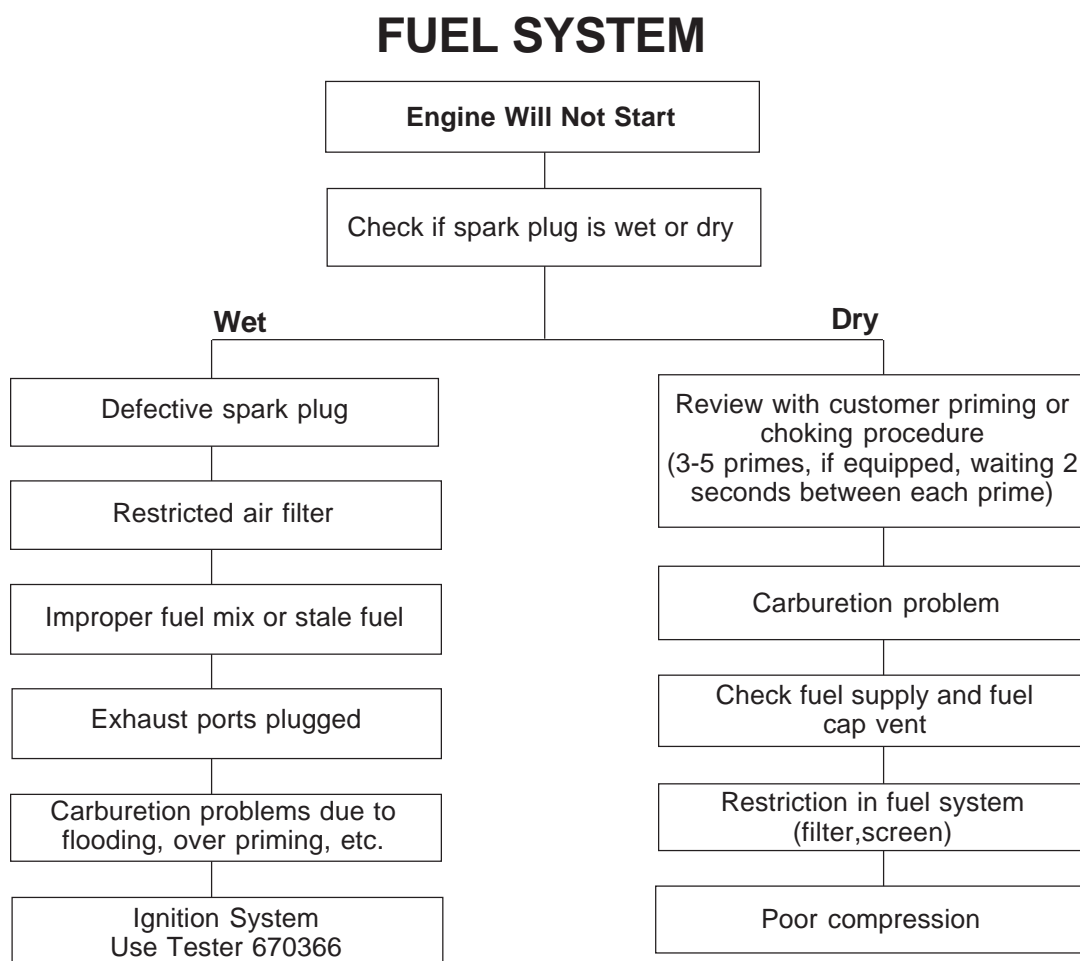
Make your troubleshooting easier by preparing as follows:

- Work in a clean, well-lighted place.
- Keep proper tools and materials nearby.
- Keep an adequate supply of clean petroleum-based solvent.

WARNING To reduce the risk of serious injury or death from fires and/or explosions, NEVER use flammable solvents (e.g., gasoline) to clean serviceable parts. Use a water-based, non-flammable solvent such as Tecumseh Degreaser Cleaner.

CAUTION NEVER use compressed air to clean debris from yourself or your clothing. When using compressed air to clean or dry serviceable parts:

- Wear appropriate eye protection.
- Use only approved air blow nozzles.
- Air pressure must not exceed 30psi (206kPa).
- Shield yourself and bystanders from flying debris.



Should more extensive repair be needed, we recommend you contact a local Tecumseh Servicing Dealer for repair. Repair manuals are also available from your local dealer or direct from Tecumseh. A complete list of the available manuals can be found at the end of this book.

2-Cycle Troubleshooting - *continued*



WARNING

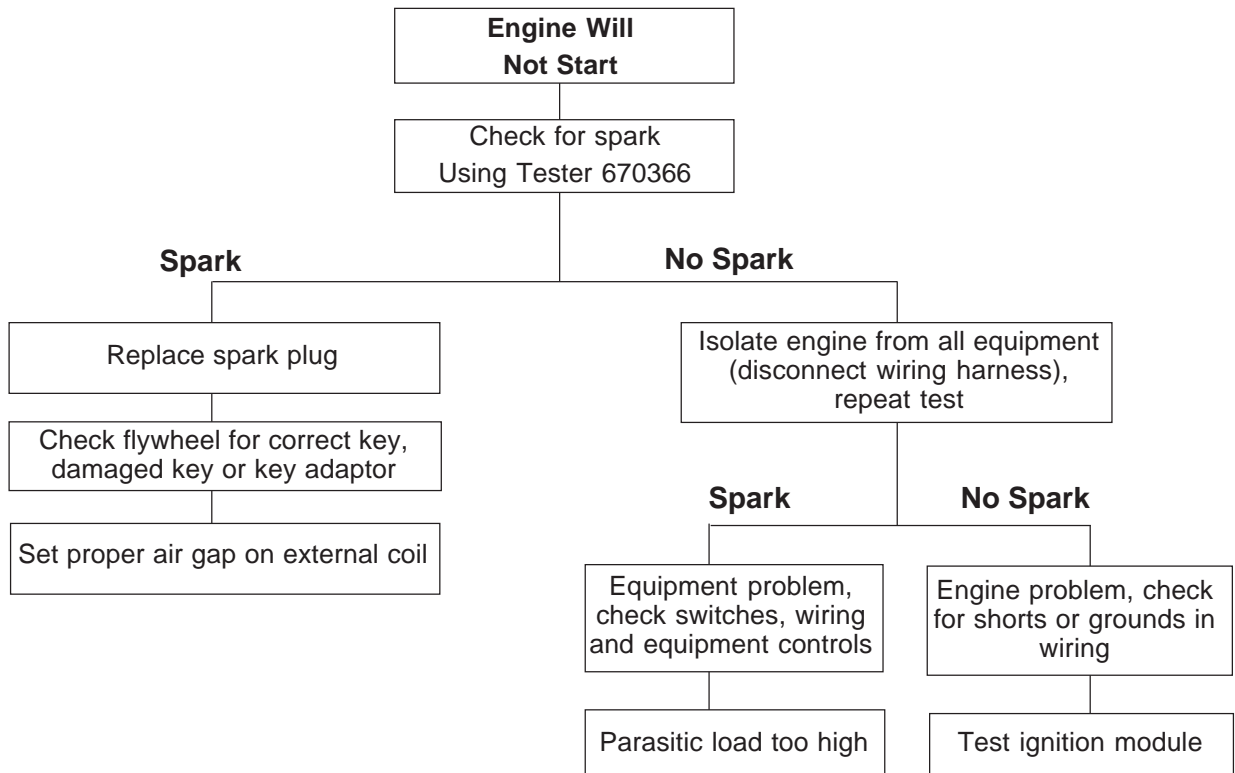
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CAUTION

NEVER use compressed air to clean debris from yourself or your clothing. When using compressed air to clean or dry serviceable parts:

- Wear appropriate eye protection.
- Use only approved air blow nozzles.
- Air pressure must not exceed 30psi (206kPa).
- Shield yourself and bystanders from flying debris.

IGNITION SYSTEM



Should more extensive repair be needed, we recommend you contact a local Tecumseh Servicing Dealer for repair. Repair manuals are also available from your local dealer or direct from Tecumseh. A complete list of the available manuals can be found at the end of this book.

Cross Reference for Specification - To - Model Number Designation

This cross reference chart allows you to determine an engine Model Number if you only have the Specification Number. Note that some Specification Number Series are current with our 2004 and later model numbering system.

VERTICAL 4-CYCLE ENGINES

Specification Number Series	Model Number	Equivalent 2004 & Later Model Number	Specification Number Series	Model Number	Equivalent 2004 & Later Model Number
10000	TNT100		145000	ECV100	
12000	TNT120		147000	ECV105	
20000	LAV25, OVRM55		148000	VH80	
20500	OVRM105		149000	VH100	
21000	OVRM60		150000	V & VM80, TVM195	
21800	OVRM60		150200	TVM & TVXL195	
22000	OVRM65, OVRM120		150500	TVM195	
23000	OV195EA (RM)		151000	ECV110, TVM195	
23500	OV195EA (Utility)		151500	TVM220	
30000	LAV30		152000	ECV120	
33000	TVS75		157000	VM100, TVM220	
40000	LAV35		157200	TVM & TVXL220	
42000	OVRM905 (Sears Only)		157400	TVM220	
42600	OVRM40, OVRM45 (Premier Engine)		200000	OVM120	
42900	OVRM40 (High Tech Look)		202000	OVXL120, OVXL125	
43000	TVS90		202200	OVXL120 (I/C)	
43600	TVS90 (Premier Engine)		202300	OHV11, OHV115	
43700	TVS90, TVXL90		202400	OVXL125	
43900	TVS90 (High Tech Look)		202500	OHV115	
44000	TVS100		202600	OVXL125 (I/C)	
44600	TVS100 (Premier Engine)		202700	OHV12, OVXL120 (Tec.1200)	
44800	TVS100		203000	OHV125, OVXL125 (Tec1250)	
46000	TVS90, TVXL90		203200	OHV13	
46600	TVS90		203500	OVXL125 (Tec.1250I/C), OHV13/135	
48000	TVS90		203600	OHV14/140	
50000	V40		203800	OHV145	
50200	LAV40		204000	OHV15/150	
52600	OVRM50, OVRM55 (Premier Engine)		204200	OHV16/160	
52800	OVRM50, OVRM55		204400	OHV165	
52900	OVRM50, OVRM55 (High Tech Look)		204500	OHV155	
53000	TVS105		204600	OHV17/170	
53600	TVS105 (Premier Engine)		204800	OHV175	
53800	TVS105		206000	OHV110	
53900	TVS105 (High Tech Look)		206200	OHV115	
54000	TVXL105		206400	OHV120	
56000	TVS105, TVS & TVXL115		206600	OHV125	
56600	TVS105, TVS115 (Premier Engine)		206800	OHV130	
56800	TVS115		206900	OHV135 (Sm. Enduro) _____ OV358EA	
56900	TVS105, TVS115 (High Tech Look)		208000	OHV180 (Lg. Enduro) _____ OV490EA	
57000	TVS & TVXL115		334000	LEV90 _____ LV148EA	
57600	TVS115 (Premier Engine)		334500	VSK90 _____ LV148SA	
57800	TVS115		335000	LEV100	
57900	TVS115 (High Tech Look)		338000	LEV100	
60000	V50, TVM125		338500	VSK100	
61000	TVS & TVXL115		340000	LEV100	
61600	TVS & TVXL115		345000	LEV100	
61800	TVS115		346000	LEV105	
61900	TVS115		347000	LEV105	
62000	LAV50		348500	VSK105	
62100	LAV50 & TVS115		350000	LEV115	
63000	TVS120		355000	LEV115	
63200	TVS120, TVEM120		360000	LEV115	
63600	TVS120 (Premier Engine)		361000	LEV120 _____	
63900	TVS120 (High Tech Look)		361400	VSK120 _____	
66000	TVS120		361500	LEV120 (Utility) _____ LV195EA	
66100	TVS120		362000	LEV120 (RM) _____ LV195EA	
70000	V60, TVM140		400000	VLV40	
80000	VH40		500000	ULT, VLV B24, VLXL50, & VLV126	
90000	VH50		501000	ULT, VLV, VLXL55, & VLV126	
100000	VH60		502000	ULT, VLV60, VLV65, & VLV126	
125000	V70		502500	VLV65, VLV66	
127000	VM70, TVM170		600400	TVT691	
127200	TVXL170		600800	TVT691 (Twin) _____ OV691EA	
135000	VH70		600900	VTX691 (Twin) _____ OV691EP	

Cross Reference for Specification - To - Model Number Designation

This cross reference chart allows you to determine an engine Model Number if you only have the Specification Number. Note that some Specification Number Series are current with our 2004 and later model numbering system.

HORIZONTAL 4-CYCLE ENGINES

Specification Number Series	Model Number	Equivalent 2004 & Later Model Number	Specification Number Series	Model Number	Equivalent 2004 & Later Model Number
15000	H22		120000	HH120	
25000	H25		130000	H70	
26000	OHH45		130200	HSK70	
35000	H30		132000	HM & HMSK70	
35400	HSK30		132500	HMXL70	
35800	H30		140000	HH70	
36700	H30		146000	ECH90	
45000	H & HT35		155000	H & HM80	
45400	HSK35		155000	HMSK80	
45800	H35		155800	HM85	
46700	H35		155900	HM & HMSK85	
47000	HXL35		156000	HM90	
55000	H40		156500	HMSK90 _____	LH318SA
55200	HS & HSSK40		159000	HM & HMSK100 _____	LH358SA
55500	HSK40		159900	HMSK105	
55700	H40		159950	HMSK110	
55800	H40		160000	HH & OH140	
55900	HSSK40		170000	HH150 & 160	
65000	H50		170000	OH160	
65300	HSK50		175000	OH120	
67000	HS & HSSK50 _____	LH195SA	180000	OH180	
67500	HSSK55 _____	LH195SP	190000	HHM80	
68000	OHH50		220000	OHM120	
68500	OHSK50		221000	OHSK110	
69000	OHH55		221200	OHSK80	
69500	OHSK55		221400	OHSK90	
71100	OHH60 _____	OH195EA	221600	OHSK100	
71500	OHSK60		221700	OHSK110	
71700	OHH65		221800	OHSK115 (Premium) _____	OH318SA
71800	OHH65 _____	OH195EP	222000	OHSK120	
71900	OHSK65		222300	OHM90	
72000	OHH70		222500	OHM100	
72500	OHSK70 (Premium) _____	OH195SA	222700	OHM110 _____	OH318EA
73500	OHSK75 (Premium) _____	OH195SP	223000	OHSK90	
75000	H60		223400	OHSK110	
76000	HSK60		223600	OHSK120	
85000	HH40		223700	OHSK125	
95000	HH50		223800	OHSK130 (Premium) _____	OH358SA
105000	HH60		224000	LH412SA	
110000	HH80		224600	OHM120	
115000	HH100				

VERTICAL 2-CYCLE ENGINES

Specification Number Series	Model Number	Equivalent 2004 & Later Model Number
3600	TC300 _____	TM049XA
670000	AV520 _____	TV085XA

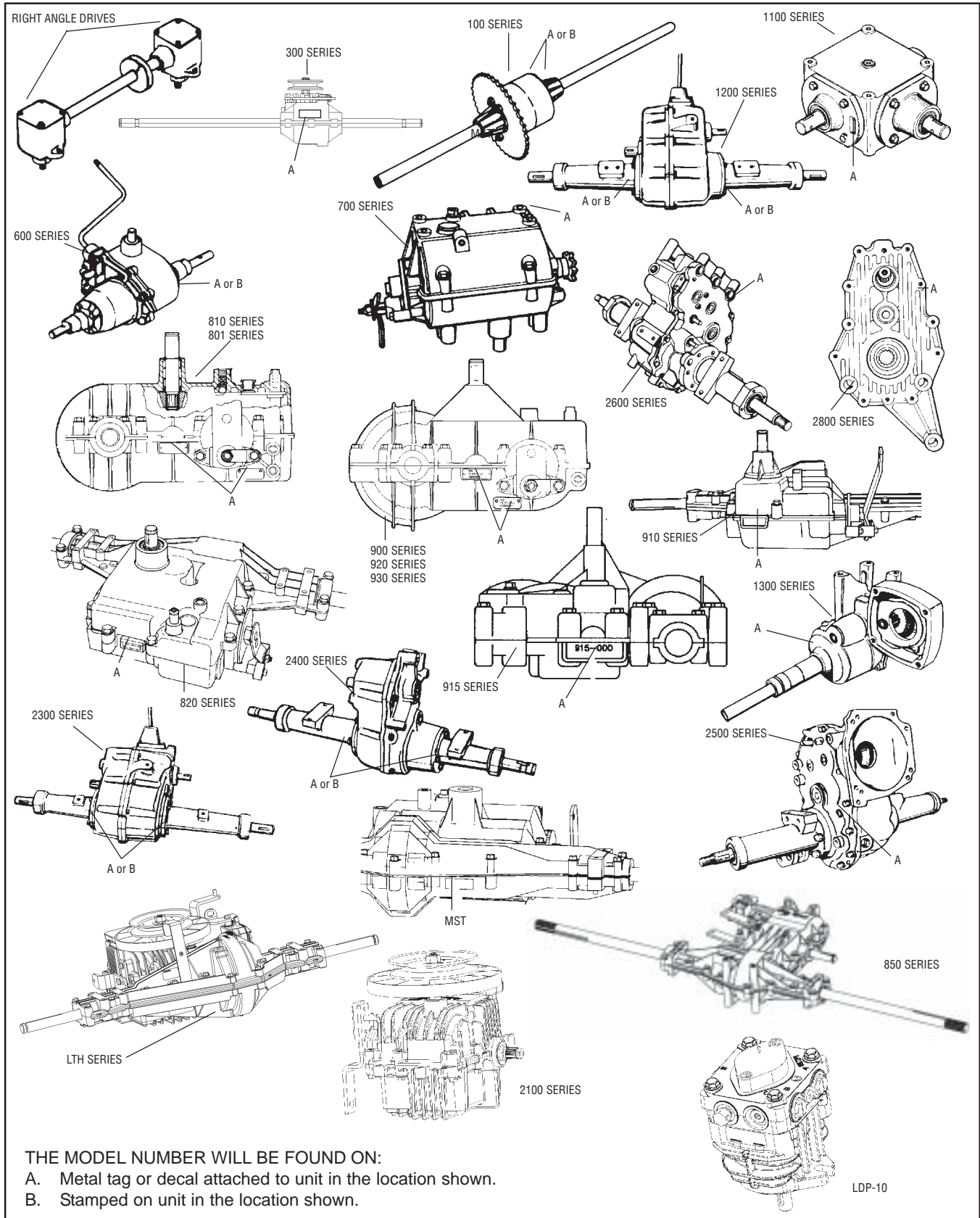
HORIZONTAL 2-CYCLE ENGINES

Specification Number Series	Model Number	Equivalent 2004 & Later Model Number
1720	HSK635 _____	TH098SA
8300	HSK850 _____	TH139SA
8700	HSK870 _____	TH139SP

Tecumseh and Peerless®

Model and Specification Numbers

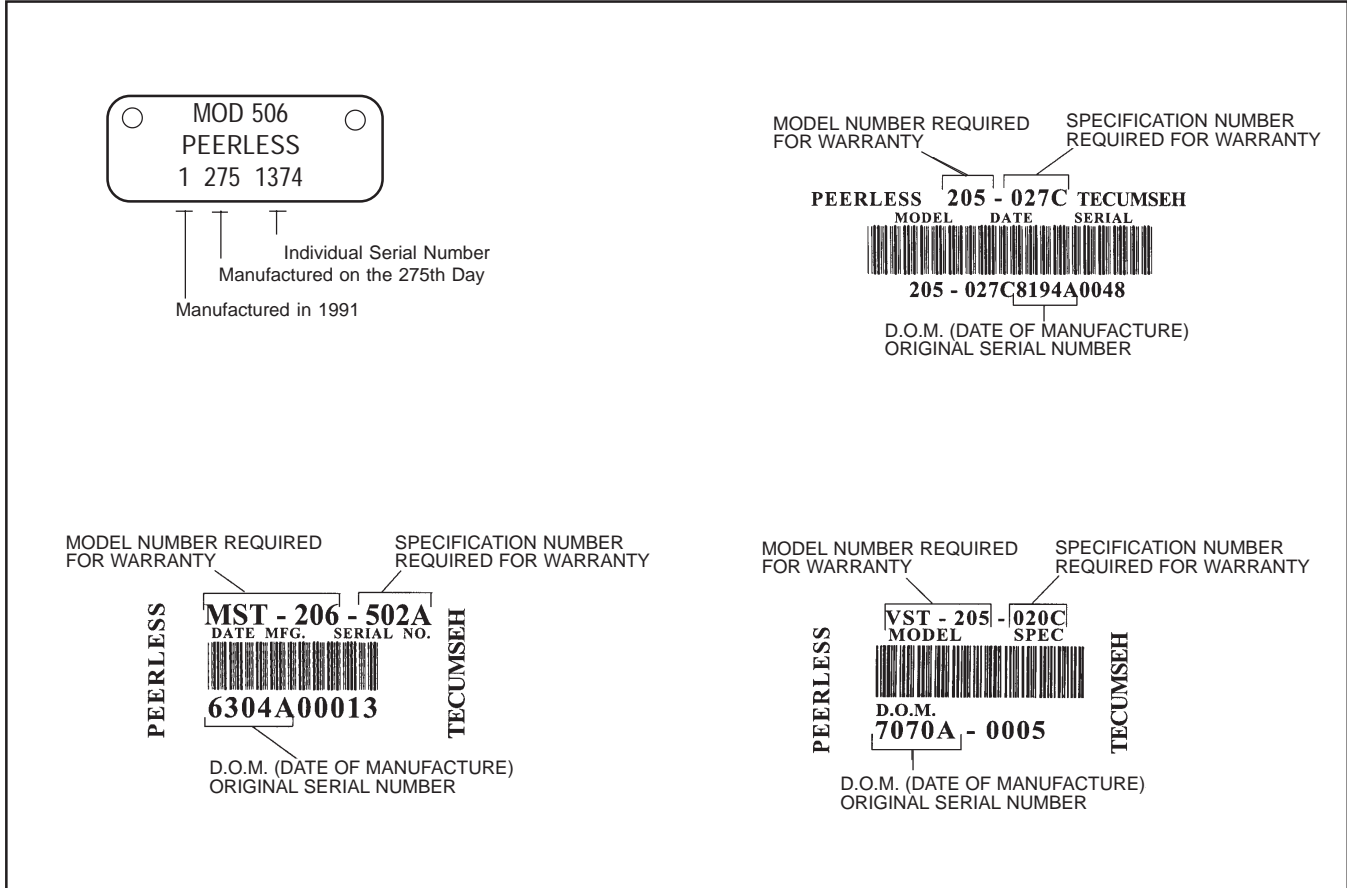
The following information is being provided to assist you in locating and recording your Tecumseh transmission components model and specification numbers. This information will be needed to use this book or obtain parts from a local Tecumseh dealer.



THE MODEL NUMBER WILL BE FOUND ON:

- A. Metal tag or decal attached to unit in the location shown.
- B. Stamped on unit in the location shown.

Various Styles of Identification Used On Tecumseh and Peerless Transmission, Transaxle and Gear Products



Early Models were not identified with a model number on the unit.

Basic Gear Drive Troubleshooting

Preparation

NOTE

Before troubleshooting any system problem, see original equipment manufacturer's (O.E.M.) instructions.

Make your troubleshooting easier by preparing as follows:

- Work in a clean, well-lighted place.
- Keep proper tools and materials nearby.
- Keep an adequate supply of clean petroleum-based solvent.

To avoid carbon monoxide poisoning, make sure engine is outdoors in a well-ventilated area.

WARNING Some maintenance procedures can not be performed until the vehicle wheels are secured and off the ground. Failure to do so could result in death or serious injury to yourself and/or bystanders.

WARNING DO NOT attempt any maintenance procedures with the engine running. Doing so could result in death or serious injury to yourself and/or bystanders.

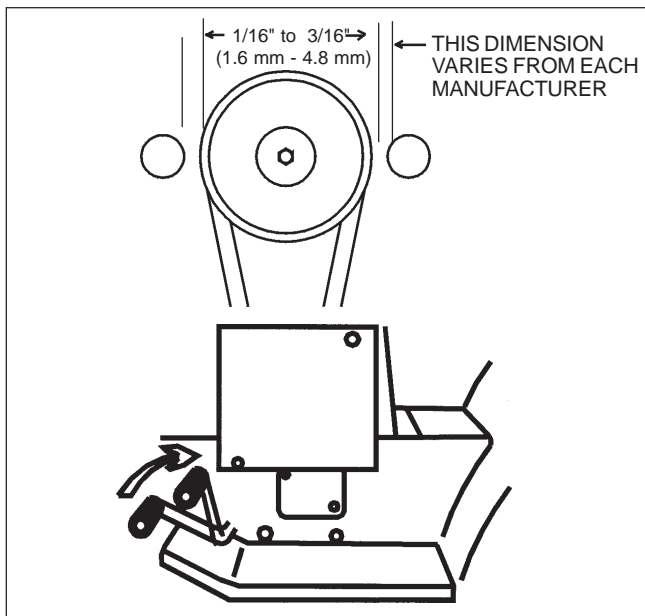
WARNING Use care when performing inspection of the drive belt assembly including all vehicle linkage. Failure to do so could result in death or serious injury to yourself and/or bystanders.

Hard Shifting Transaxles and Drive Belts

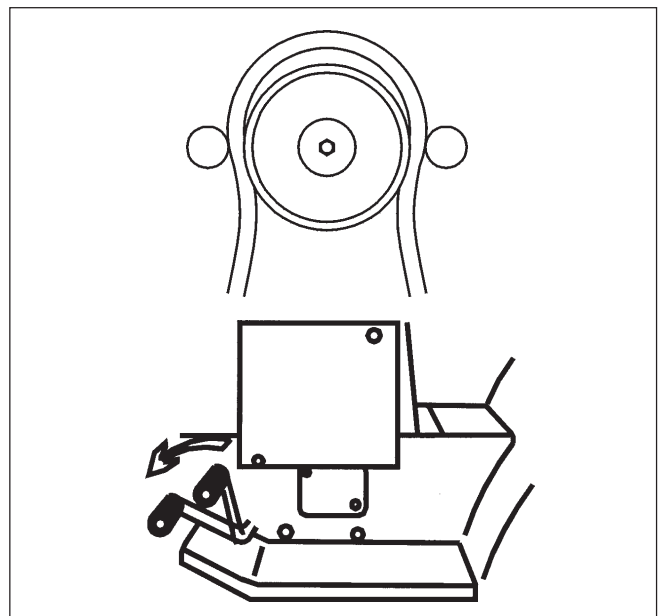
Often hard shifting is blamed on an internal problem in the transaxle.

To determine if the problem is transaxle or equipment related make these simple checks.

1. Turn the unit off so that all power is removed to the transaxle.
2. With the unit off, move the shift lever through the shift gate. Movement of the lever should have only slight resistance. The shifting effort should be equal when the engine is off and when running. If the unit is difficult to shift the problem would be internal and the transaxle would need to be removed and repaired.
3. If the unit shifts with ease, check the following areas that would be equipment related. Check to see if the belt is releasing from the pulley on the engine and transmission / transaxle, it may require that the belt guides be repositioned. The distance required from the pulley to the guide is typically 1/16" to 3/16" (1.6 mm - 4.8 mm), always check the O.E.M. specs.



For proper declutching to occur, it is very important that the engine belt guide be set at a predetermined clearance when engaged (set by the manufacturer) and away from the belt with the belt engaged.



With clutch disengaged, it is very important that the belt blossoms away from the engine pulley. Belt must stop turning before transaxle shifting can occur.

Improper belt or belt guide clearance will not allow the belt to disengage, causing internal transmission damage.

Basic Gear Drive Troubleshooting - *continued*

4. Check to see if the pulley is damaged and may not be releasing the belt.
5. Confirm the correct length and type of belt, as recommended by the manufacturer, is installed.
6. Check the brake/clutch pedal to make sure that when the pedal is depressed that the idler pulley is releasing the belt tension before it applies the brake. If this does not happen the unit will still be under a load and be impossible to shift.
7. The final area to check would be for damaged or binding shift linkage.

Hard shifting with the engine off could be caused by:

1. Shift linkage out of adjustment.
2. Corrosion in the transaxle or transmission.
3. Damaged shift keys, gears, or shifter brake shaft.
4. Belt guides missing or improperly adjusted (see equipment manufacturer specs).

Unit seems to slip:

1. Check for proper belt adjustment (consult O.E.M. operator's manual).
2. Check for proper clutch/brake adjustment (consult O.E.M. operator's manual).
3. Check pulley condition and wheels for sheared or damaged keys.
4. Check drive belt condition, if glazed or worn, replace it.
5. Possible internal transmission damage. We suggest you contact a local Tecumseh Servicing Dealer.

Tecumseh and Peerless Transmission, Transaxle and Gear Products

NOTE

Before troubleshooting any system problem, see original equipment manufacturer's (O.E.M.) instructions.

Make your troubleshooting easier by preparing as follows:

- Work in a clean, well-lighted place.
- Keep proper tools and materials nearby.
- Keep an adequate supply of clean petroleum-based solvent.

To avoid carbon monoxide poisoning, make sure engine is outdoors in a well-ventilated area.

WARNING Some maintenance procedures can not be performed until the vehicle wheels are secured and off the ground. Failure to do so could result in death or serious injury to yourself and/or bystanders.

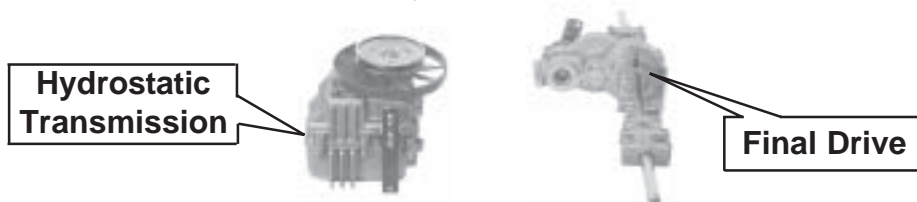
WARNING DO NOT attempt any maintenance procedures with the engine running. Doing so could result in death or serious injury to yourself and/or bystanders.

WARNING Use care when performing inspection of the drive belt assembly including all vehicle linkage. Failure to do so could result in death or serious injury to yourself and/or bystanders.

LTH-2000 Series Troubleshooting Chart

Tecumseh's lawn tractor hydrostatic transaxle (LTH) includes a hydrostatic transmission attached to a final drive. Use of this troubleshooting chart will aid in determining the source of a problem; the hydrostatic transmission, final drive or vehicle's belt drive and/or linkage systems.

Tecumseh LTH-2000 Series Hydrostatic Transaxle Troubleshooting



SYMPTOM	PROBLEM	CORRECTIVE ACTION
REDUCED POWER	Improper belt tension	Belt worn, replace
	Belt worn, glazed, or oil saturated	Replace belt
	Drive pulley worn	Replace pulley and belt (See O.E.M. equipment manual)
	Brake set too tight	Set brake adjustment (See O.E.M. equipment manual)
	Shifter linkage misadjusted or broken	Linkage damaged or loose, replace or adjust (See O.E.M. equipment manual)
	Fluid low in hydrostatic transmission	Check and add fluid if low (Part No. 730228)
	Hydrostatic transmission bad	Replace hydrostatic transmission
DIFFICULT TO SHIFT	Linkage broken or bent	Repair or replace linkage (See O.E.M. equipment manual)
	Hydrostatic transmission pump seized	Replace hydrostatic transmission
	Hydrostatic transmission control friction pack misadjusted	Replace friction pack washers, tighten nut to 100 in. lbs. loosen nut 4-turns

Tecumseh LTH2000 Series Transaxle Troubleshooting - *continued*

SYMPTOM	PROBLEM	CORRECTIVE ACTION
UNIT IS NOISY	Final Drive Gear Noise	Check, add gear oil to final drive Check, replace worn gears Check, replace worn bearings
	Hydrostatic Transmission Noise	Replace hydrostatic transmission
	Transaxle clicking	Mechanical disconnect not properly engaged, check for obstruction Check, replace mechanical disconnect components (If hydrostatic transmission shaft is damaged, replace transmission)
DOES NOT DRIVE	Improper belt tension	Belt worn, replace (See O.E.M. equipment manual)
	Brake setting incorrect	Adjust brake to proper setting (See O.E.M. equipment manual)
	Belt worn, glazed, or oil saturated	Replace belt (See O.E.M. equipment manual)
	Drive pulley worn	Replace pulley and belt (See O.E.M. equipment manual)
	Transaxle - hydrostatic transmission bad	Replace hydrostatic transmission
	Shifter linkage misadjusted or broken	Linkage damaged or loose, replace or adjust (See O.E.M. equipment manual)
	Fluid low in hydrostatic transmission	Check and add fluid if low (Part No. 730228)
	Disconnect is in freewheel position	Move control to connected position (See O.E.M. equipment manual)
	Sheared or missing axle key	Replace missing or broken key
	Damaged or broken final drive gear	Check, replace worn or damaged gear
	Hydrostatic transmission leaking	Replace hydrostatic transmission
LEAKING LUBRICANT	Hydrostatic transmission leaking	Replace hydrostatic transmission
	Final drive leaking at seam	Split final drive housing, clean old sealant off, replace seals, apply new sealant (torque bolts 80-120 in. lbs.)
	Final drive leaking at shaft seal	Split final drive housing, clean old sealant off, replace seals, apply new sealant (torque bolts 80-120 in. lbs.)
BRAKE NOT WORKING	Linkage out of adjustment	Adjust brake linkage (See O.E.M. equipment manual)
	Linkage bent or broken	Replace components, set brake (See O.E.M. equipment manual)
	Brake setting incorrect	Adjust brake to proper setting (See O.E.M. equipment manual)

1800 / VST Troubleshooting

The information on this page has been provided to help understand the internal operation of the VST. Do not use this information to attempt any internal repairs. Tecumseh's current policy on hydrostatic transaxles that have internal failures is to replace the complete unit. This has not changed. However, Tecumseh would like to provide a failure checklist to assist in making an accurate evaluation of the complete tractor to eliminate any unnecessary replacements. Here is a list of items to check and corrective actions to take.

To properly test the unit for power loss.

1. Allow the unit to cool before trying the following steps.
2. Put the shift lever in a position that is 1/2 of the travel distance from neutral to forward.
3. Place the tractor on a 17° grade.
4. Drive the tractor up the grade (without the mower deck engaged). The loss of power experienced should be approximately 20%. This is considered normal. If the loss of power is approximately 50%, this would be considered excessive.
5. Bring the unit to neutral, shift into forward and note the response. Care should be taken to move the lever slowly to avoid an abrupt wheel lift.

To determine if the problem is with the hydro unit, all external problem possibilities must be eliminated. Here are some potential problem areas.

1. **Overheating:** Heat can cause a breakdown in the viscosity of the oil which reduces the pressure used to move the motor. Remove any grass, debris, or dirt buildup on the transaxle cover and / or between the cooling fins and fan. Buildup of material will reduce the cooling efficiency.
2. **Belt slippage:** A belt that is worn, stretched, or the wrong belt (too large or wide) can cause belt slippage. This condition may have the same loss of power symptom as overheating. Typically, the unit which has a slipping belt will exhibit a pulsating type motion of the mower. This can be verified visually by watching the belt and pulley relationship. If the belt is slipping, the belt will chatter or jump on the pulley. If the belt is good, a smooth rotation will be seen. Replace the belt and inspect the pulley for damage.
3. **Leakage:** The VST and 1800 Series have two oil reservoirs which can be checked for diagnostic purposes. The first is the pump and motor expansion bellows. With a small diameter blunt or round nose probe, check the bellows depth through the center vent hole. Proper depth from the edge of that hole is 3-1/4 - 3-1/2 inches (8.25 - 8.9 cm).

The second chamber is for the output gears including the differential. FIRST make sure the tractor is level, then remove the drain/fill plug. NOTE: Some units that do not have differential disconnect will have two plugs. We recommend using only the primary plug. With a small pocket rule insert until you touch bottom of case. You can then remove it and check for 1/4 - 3/8 inches (6.5 - 9.5 mm) contact, this is full at its 8 oz. capacity.

4. **Low ground speed:** If the linkage is not synchronized to absolute neutral, or the shift lever is not properly fastened to the tapered control shaft, full forward travel may not be achieved. This may cause a false reading and be misdiagnosed as a low power condition. This also could be caused by the brake not releasing.

To determine absolute neutral, the hole in the tapered control shaft must face straight up and down, at this point make sure the O.E.M. linkage is in neutral. To properly fasten the control lever to the shaft, torque the nut to 25-35 ft. lbs. (34 - 48.3 Nm) of torque with the shaft and the lever in neutral. When attaching the shifter arm to the shaft you must prevent any rotation during torquing. This can be done by placing a long 5/16" bolt in the hole of the shaft. Hold the bolt until the tapers are locked and the nut torque is correct.

To make sure that the brake is not binding, drive the unit up a slight grade. Position the speed control lever into neutral. The unit should coast backwards. If the unit does not coast back slowly, the brake is not released from the brake disk. Adjust the brake linkage to release the brake completely when the foot pedal is released.

5. **Hard to shift:** Typically hard to shift symptoms are not caused by the hydrostatic unit. The shift arm should move with relative ease. Approximately 40-50 in. lbs. (4.48 - 5.6 Nm) at the transaxle for foot pedal units or 150-200 in. lbs. (16.8 - 22.4 Nm) for hand operated units. This varies depending on the type of linkage. Binding may occur in the linkage connections due to rust or moisture. Lubricating these connections and checking for bent or damaged parts should resolve hard shifting.

Tecumseh and Peerless® Lubrication Requirements

NOTE

Use *ONLY* the recommended lubricant in all models as listed to insure proper operation and long life.

TRANSAXLES		TRANSMISSIONS		RIGHT ANGLE AND T-DRIVES			
Model No.	Quantity	Model No.	Quantity	Model No.	Quantity		
301	Non-Serviceable	2500	†	All Models	4 oz./118 ml Grease		
600	24 oz./710 ml Oil	2600	†	Except *			
800	30 oz./887 ml Grease	700	12 oz./355 ml Grease	*1408-P91	3 oz./89 ml Grease		
801	36 oz./1065 ml Grease	700H	12 oz./355 ml Grease	*1409-P91			
820	36 oz./1065 ml Grease	2800	†	*1410-P91			
900	26 oz./769 ml Grease	HYDROSTATIC TRANSAXLES and TRANSMISSIONS		*3002			
910	18 oz./532 ml Grease			*3003			
915	10 oz./296 ml Grease			*3028			
920	30 oz./887 ml Grease			*3029			
930	30 oz./887 ml Grease			*3035			
1200	48 oz./1420 ml Oil ††			1800 Series		Limited service; use Kit Part No. 799030	1000 Series
1301	32 oz./946 ml Oil	VST205/705	Limited service; use Kit Part No. 799030	1100		16 oz./473 ml Oil	
1305				DIFFERENTIALS		All Models	3 oz./89 ml Grease
1309		44 oz./1301 ml Oil	LTH 2000	Limited service; final drive ONLY 8 oz./240 ml Oil	TWO SPEED AXLE		
1313					All Models	2 oz./59 ml Grease	
1302	2100		Non-Serviceable	THREE SPEED AXLE			
1303				All Models	2 oz./59 ml Grease		
1304				LDP-10	Non-Serviceable		
1306							
1307							
1308							
1310							
1311							
1312	Grease: Bentonite Grease Part Number 788067B Oil: SAE E.P. 80W90 Oil Part Number 730229A † Refer to O.E.M. Technician's Manual for type of lubricant. †† To be filled through shift lever opening. ††† Some 1000 Right Angle and T-Drives use Bentonite Grease. †††† Tecumseh's current policy on VST and 1800 Series transaxles with internal failure, is to replace the complete unit. VST and 1800's have two separate reservoirs which can be checked for diagnostic purpose only. The output gear reservoir can be checked with a small pocket rule as outlined in the Tecumseh & Peerless Transmission and Drive Products Handbook. Refer to Tecumseh & Peerless Transmission and Drive Products Handbook, 691218.						
1314							
1315							
1316							
1317							
1318							
1320							
1321							
1322							
1325							
1328							
1329							
1319							
1323	24 oz./710 ml Oil	Grease: Bentonite Grease Part Number 788067B Oil: SAE E.P. 80W90 Oil Part Number 730229A † Refer to O.E.M. Technician's Manual for type of lubricant. †† To be filled through shift lever opening. ††† Some 1000 Right Angle and T-Drives use Bentonite Grease. †††† Tecumseh's current policy on VST and 1800 Series transaxles with internal failure, is to replace the complete unit. VST and 1800's have two separate reservoirs which can be checked for diagnostic purpose only. The output gear reservoir can be checked with a small pocket rule as outlined in the Tecumseh & Peerless Transmission and Drive Products Handbook. Refer to Tecumseh & Peerless Transmission and Drive Products Handbook, 691218.					
1326							
1327							
MST200	16 oz./473 ml Oil						
VST205 and 1800's	††††						
2300	64 oz./1892 ml Oil						
2400	32 oz./946 ml Oil						



Repair Manuals

Service Number 740043 or 695244A

† OHM120
‡ OH318SA (OHSK110), OH358SA (OHSK120-130)
OH318EA (OHM90-110)
† OHM120
OH195EA (OHH60), OH195EP (OHH65)
OHH/OHSK40-130
OH195SA (OHSK70), OH195SP (OHSK75)
‡ OH318SA (OHSK110), OH358SA (OHSK120-130)
OH180
OVM120
* OVXL120,
* OVXL/C120
* OVXL125
OV195EA
OV358EA (OHV110-135)
OV490EA (OHV140-180)
OV691EP (VTX691, TVT691)
OVM120
* OVXL120
* OVXL/C120
* OVXL125

Service Number 691462A

HH140-160
OH120-160

Service Number 740047 or 692508

AH520
AH600
HSK840
HXL840
TC200
TCH200 Type 1500
TH098SA (HSK600), HSK635
TH139SA (HSK845, 850)
TH139SP (HSK870)
AV600
TV085XA (AV520)
TVS600

Service Number 694988

TVS840
TVXL840

Service Number 694782

TCH300
TM049XA (TC300)

Service Number 740049 or 692509

ECV100-120
HMSK70, LH318SA (HMSK80), HMSK90,
H22
H25
H30-80
HM70-100
HH40-120
HHM80
HMXL70
HT30
HT35
HXL35
HS40-50
HSK30-70
HSSK40, LH195SA (HSSK50), LH195SP (HSSK55)
LH358SA (HMSK100), HMSK110
LAV25-50
LEV80, LV148EA (LEV90), LV195EA (LEV120)
LV148SA (VSK90), VSK100
TNT100
TNT120
TVS75-120
TVXL90-120
TVM125-170
TVM195-220
TVXL195-220
V40-80
VH40-100
VM70-100
VLV-ALL

Service Number 740045 or 691218

100 Series Differentials
MST200 Series Transaxles
300 Series Transaxles
600 Series Transaxles
601 Slow Speed Transaxle
700 Series Transmissions
700H Series Transmissions
800/801 Series Transaxle
820 Series Transmission
900 Series Transaxles
910 Series Transaxles
915/940 Series Transaxles
920 Series Transaxles
930 Series Transaxles
1000/1100 Series Right Angle / T-Drives
1200 Series Transaxles
1300 Series Transaxles
2300 Series Transaxles
2400 Series Transaxles
2500 Series Transaxles
2600 Series Transaxles
VST Transaxles



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