

TECUMSEH ENGINES COMPANY PRODUCTS

HORIZONTAL CRANKSHAFT "MINI-BIKE" ENGINES

AND OPERATING INSTRUCTIONS

OWNERS MANUAL



TECUMSEH PRODUCTS COMPANY ENGINE DIVISIONS GRAFTON, WISCONSIN 53024

Find It Fast In The 'Yellow Pages'

- 1. PROVIDE EFFICIENT VENTILATION. Exhaust gases contain carbon monoxide which is odorless and is a deadly poison. Proper care must be taken to provide efficient ventilation when operating engine in closed rooms.
2. DO NOT FILL GAS TANK WHILE ENGINE IS RUNNING! Avoid spilling gasoline on hot engine. This may cause an explosion.
3. KEEP SCREWS, NUTS AND BOLTS TIGHT.
4. IN MAKING ANY ADJUSTMENT TO MINI-BIKE, ALWAYS DISCONNECT HIGH TENSION WIRE TO SPARK PLUG, otherwise engine may start and cause a serious accident.

CAUTION "SAFETY PREVENTS ACCIDENTS"

WARRANTY The Lauson-Power Products Engine Divisions of Tecumseh Products Company (Manufacturer) will, at its option, replace or repair WITHOUT CHARGE to the original purchaser any part or parts manufactured by it and found upon examination by any Manufacturer's Authorized Service Outlet or at the Manufacturer's Factory at Grafton, Wisconsin, to be DEFECTIVE IN MATERIAL AND/OR WORKMANSHIP if received for such examination, (i) in the case of engines for use on chain saws within thirty (30) days, (ii) in the case of engines used on two wheeled riding type vehicles (such as mini-bikes, trail bikes and scooters) within ninety (90) days EXCEPT that engines used to power any vehicles used in competitive racing or on commercial and/or rental tracks are not warranted in any respect, (iii) in all other cases within ONE YEAR, from date of original purchase.

ENGINE DIVISIONS - GRAFTON, WIS. 53024



Dear Owner:

May we take this opportunity to thank you for purchasing a Tecumseh powered unit. Most manufacturers offer Tecumseh engines on their lawn and garden equipment and we trust the satisfaction you receive from this unit will lead you to request Tecumseh power on future purchases.

We know that many of you have purchased this machine expressly for the enjoyment of the younger members of your family. They will be eager to use it and we all want them to enjoy it to the fullest.

It is, however, a precision built machine and must be properly maintained. Dirt, heat and overspeeding are the three main causes of short life and failures as a result are not covered by warranty but rather are the owner's responsibility.

Knowing what a temptation it is to go "just a little faster" and often how hard it is for a teenager to find time out of his many activities to perform necessary maintenance, we urge you to read and carefully go over the balance of this booklet with other members of your family. If the "do's and don'ts" are observed many, many happy hours will be enjoyed.

The engine is warranted against defects in material and/or workmanship as set forth in our warranty statement on the back cover of this booklet. It is not, however, an insurance policy against all failures and it is our hope that with this word of caution we can help you avoid costly repairs.

Yours very truly,

[Signature]

R. C. Roll Executive Vice President Tecumseh Products Company

A. BEFORE STARTING

- 1. FILL FUEL TANK WITH "REGULAR GRADE" GASOLINE ONLY. DO NOT MIX WITH OIL. BE SURE GASOLINE IS FRESH AND CONTAINER IS CLEAN. Be careful not to spill the gasoline and wipe away any that is spilled.

USE REGULAR GASOLINE ONLY DO NOT MIX OIL WITH GASOLINE.

- 2. FILL CRANKCASE WITH FRESH CLEAN OIL. BE SURE MINI-BIKE IS SITTING LEVEL AND FILL SLOWLY TO AVOID TRAPPING AIR. FILL TO TOP OF FILLER HOLE AND REPLACE OIL FILLER PLUG SECURELY. IF ENGINE IS EQUIPPED WITH DIP STICK FILL TO FULL MARK ONLY. SEE FIG. 1

USE ONLY OIL MARKED WITH "MS" CLASSIFICATION. OIL UNMARKED OR CLASSIFIED "MM" OR "ML" ONLY CANNOT BE USED.

PLEASE NOTE - ENGINES SEIZING BECAUSE OF LACK OF OIL OR WEARING OUT FROM DIRTY OIL ARE NOT WARRANTY. THESE ARE TWO OF THE MOST FREQUENT CAUSES OF PREMATURE ENGINE FAILURE.

- 3. CHECK AIR CLEANER (Fig. 2) - BE SURE IT IS IN PLACE AND COVER IS SECURELY LOCKED IN PLACE. IT IS A PAPER ELEMENT TYPE CLEANER WHICH WILL REDUCE ENGINE POWER WHEN IT BECOMES CLOGGED WITH DIRT. REFER TO D (PAGE 2) FOR AIR CLEANER MAINTENANCE.

PLEASE NOTE - Dirty air entering the internal parts of the engine thru an improperly mounted or punctured air filter can ruin an engine in minutes. This is a frequent cause of premature engine wear and is not warranty.

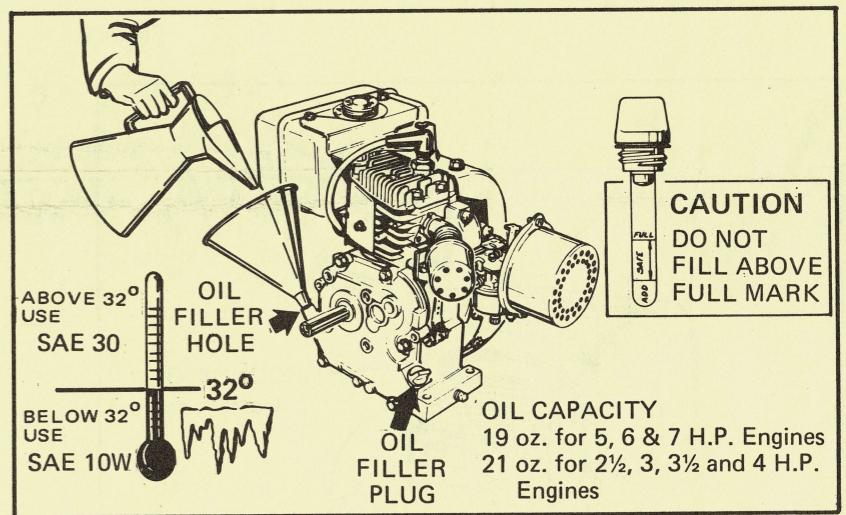


Figure 1

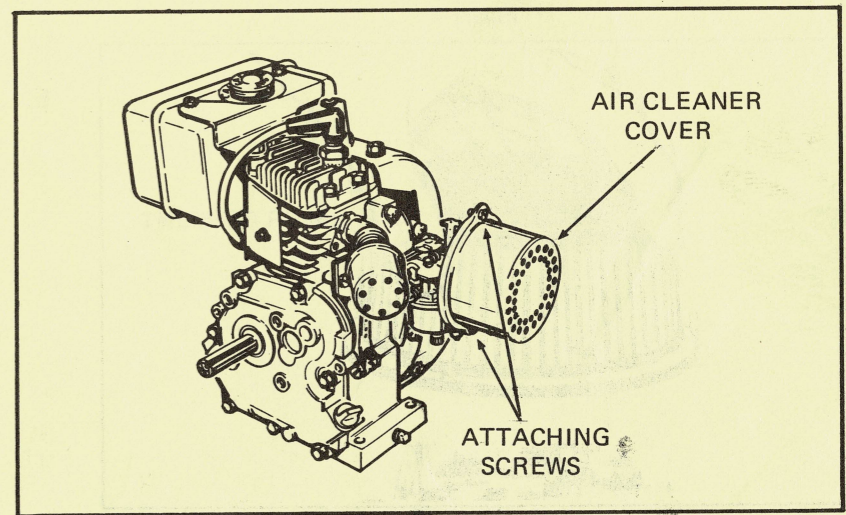


Figure 2

B. TO START ENGINE

Before starting BE SURE spark plug wire is attached to spark plug and disengage any clutches or belts. Start the engine according to steps one, two and three below.

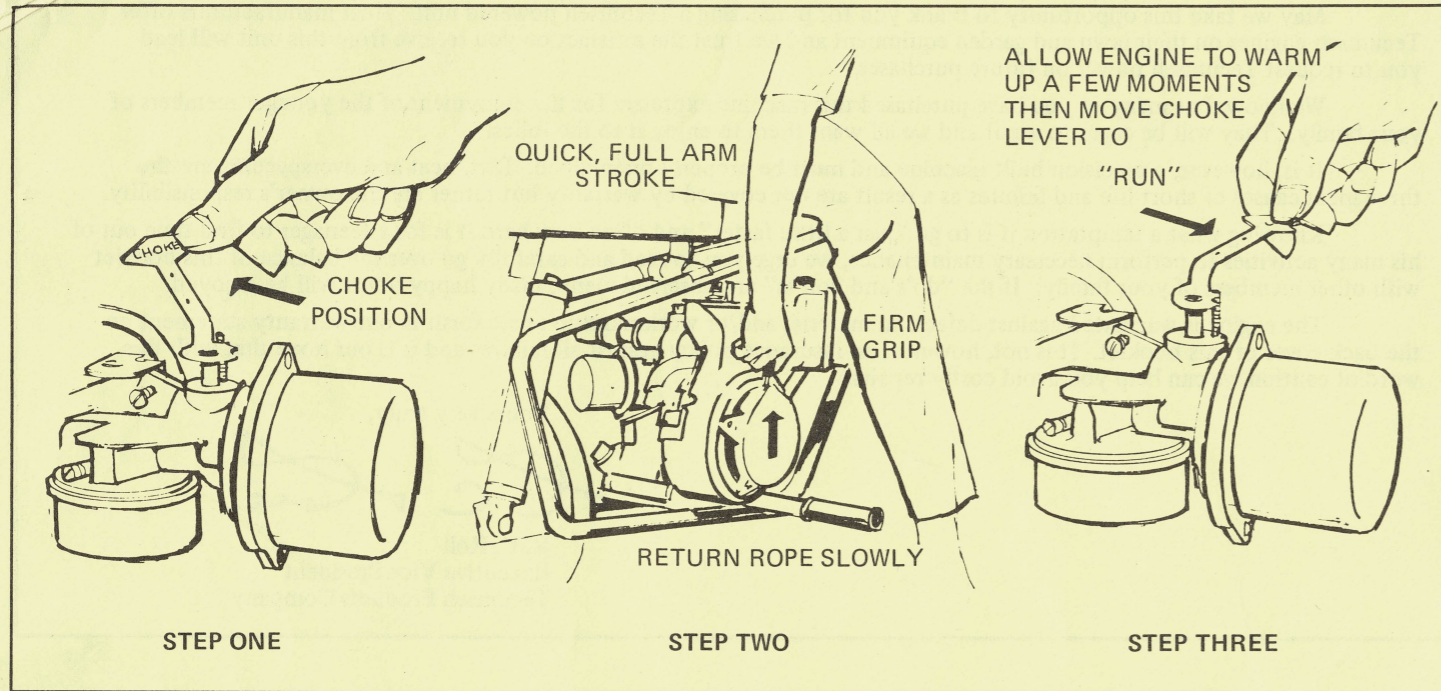


Figure 3

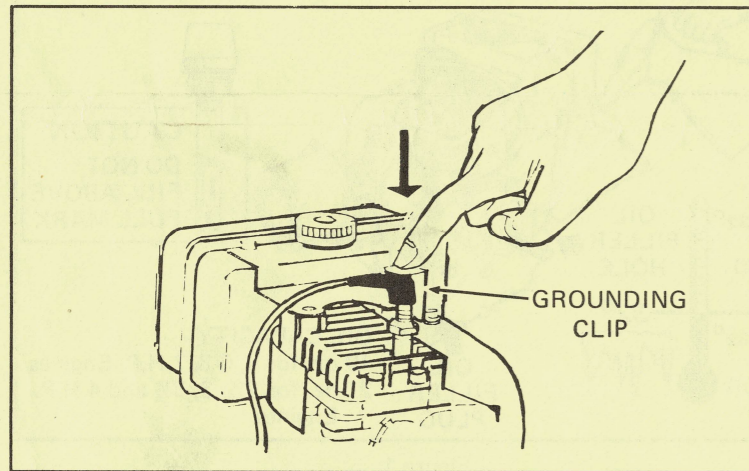


Figure 4



Figure 5

C. TO STOP ENGINE

1. Press shorting clip (Fig. 4) against spark plug wire boot so that sharp prong pierces boot and contacts plug terminal. Hold firmly until engine stops.
2. Spark plug wire can be removed from spark plug during idle periods to prevent unauthorized use of engine.

D. AIR CLEANER MAINTENANCE

The air cleaner should be removed frequently and tapped lightly against a solid surface (Fig. 5) which will dislodge loose dirt accumulation. The pores will eventually clog (engine will begin to lose power) and at this point it will have to be replaced. Your Tecumseh dealer stocks them.

NEVER wash the paper air cleaner or attempt to brush dirt from it as this destroys its filtering ability.

NEVER run the engine without the filter in place or with a filter that has a hole punctured in the paper.

E. MAXIMUM ENGINE SPEED

1. Engines are preset at the factory for a maximum of 4,000 RPM. After some experience, it is a great temptation to increase this maximum setting, but doing so can quickly and easily cause a major and costly engine failure and is **NOT** covered by warranty. If there is any doubt that engine is not running at factory set maximum speed, contact your closest Tecumseh servicing dealer who has the proper equipment and know-how to adjust the speed setting if necessary.

PLEASE NOTE — Tying down or manually holding the governor arm open will also overspeed the engine with the same result. The evidence of this type of failure is readily discernable to a servicing dealer and it is **NOT** covered by warranty and any repair cost is the owner's responsibility.

F. ENGINE MAINTENANCE

1. Check equipment and engine periodically and re-tighten any loose engine base mounting screws, air cleaner cover mounting screws and other exposed hardware.

2. Change oil regularly. Be sure oil drain plug is replaced securely before refilling.

IMPORTANT — AFTER FIRST TWO TANKS OF GAS HAVE BEEN USED, DRAIN OIL COMPLETELY AND REFILL AS DIRECTED IN PARAGRAPH "2" ABOVE. OIL LEVEL SHOULD BE CHECKED FREQUENTLY DURING THIS "BREAK-IN" PERIOD.

3. Check oil level frequently between changes. Add oil if necessary.
4. Keep head and cylinder fins clean. This is an air-cooled engine and will operate efficiently only if kept clean. Over heating and any resultant damage from clogged cylinder fins is **NOT** covered by warranty.
5. Maintain air cleaner as directed in "Before Starting Engine" Paragraph 3.

G. CARBURETOR ADJUSTMENTS

Carburetors are correctly adjusted for maximum performance when they leave the factory but can be adjusted if necessary. Because mini-bikes use a centrifugal clutch and carburetor high speed settings must be made with engine at full throttle, the unit must either be on a kick stand or blocked up so that the back wheel is free of the ground. In either case, be sure that the bike is in a secure upright position with no chance of tipping over and then proceed as follows.

NOTE — A dirty or partially clogged air cleaner will cause engine to run rich and lose power. (Refer to Paragraph D) Clean or change the air cleaner element as necessary — do not change carburetor settings until you have eliminated this possibility. New air cleaner elements can be purchased from your nearest Tecumseh servicing dealer.

1. Close "high speed adjusting needle" **FINGER TIGHT ONLY** by turning clockwise. Do not force as this will damage carburetor internal seat. (Fig. 7)
2. Open (counterclockwise) one full turn.
3. Close "idle adjusting needle" **FINGER TIGHT ONLY** by turning clockwise. Do not force as this will damage carburetor internal seat. (Figure 7)
4. Open (counterclockwise) five-eighths (5/8) turn.
5. Start engine.
6. With engine running at full throttle adjust "high speed adjusting needle" backward and/or forward 1/8 turn at a time until engine runs smooth. Allow engine to run at each new needle setting for at least 10 seconds to give engine time to react to each new setting. When engine is running smoothly correct setting has been reached.
7. Close throttle until engine is idling and adjust "Idle adjusting needle" in same manner.

H. SPARK ARRESTER MUFFLER

NOTICE: Some engines may be equipped with a spark arrester muffler which is a replaceable screen type approved by the U.S.D.A. Forest Service as complying with Standard 5100-1A. These mufflers can be identified by "Spark Arrester" stamped on end cover.

Maintenance: Removal and inspection of screen required every 25 hours. If screen has failed, burned out or holed, install new screen. Replacement screens are available through any Tecumseh registered service account. For location check your Yellow Page directory under "Engines, Gasoline."

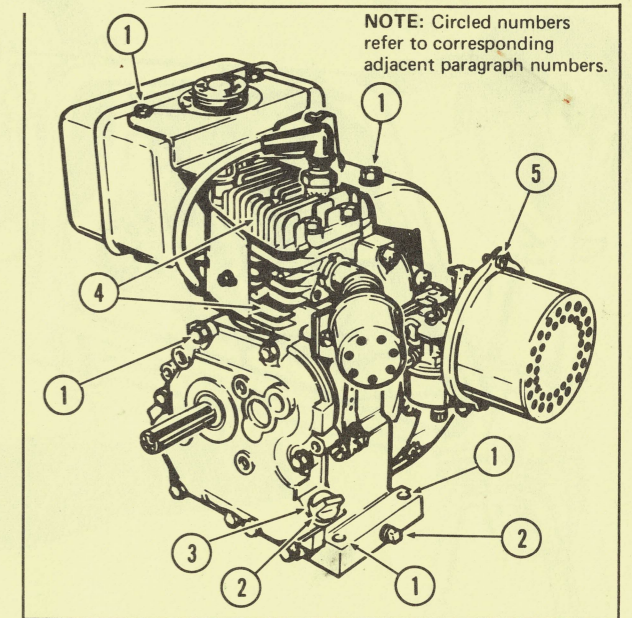


Figure 6

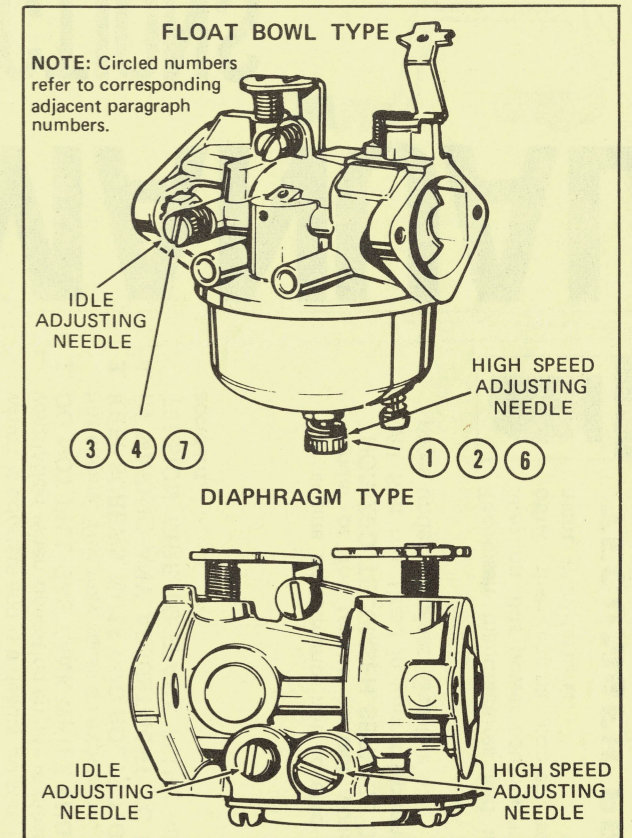


Figure 7

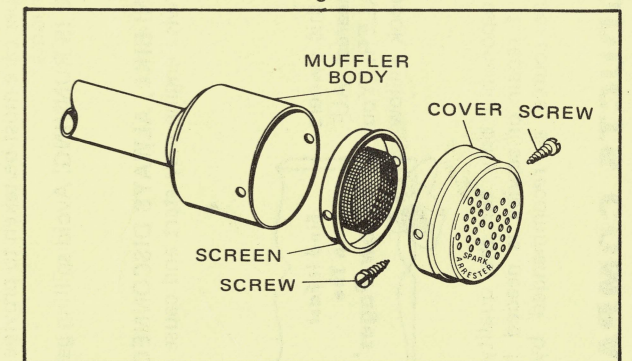


Figure 8