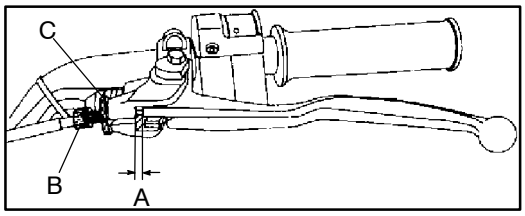
CLUTCH ADJUSTMENT

Clutch Lever Freeplay

1. Measure clutch lever freeplay between the perch and the lever (A). This distance should be 1/8″ - 3/16″ (3.1 mm - 4.7 mm).



2. If adjustment is required, slide the clutch perch pivot boot down the clutch cable to access the clutch adjustment screw (B) and lock ring (C).
3. Loosen the lock ring and turn the screw in (clockwise) to increase lever travel. Turn the screw out (counterclockwise) to decrease lever travel. Tighten the lock ring.
4. Squeeze the lever fully and release. Slightly squeeze the lever again until a slight resistance is felt. Measure the freeplay again. If necessary, repeat the adjustment procedure until proper freeplay is attained.
5. Replace the clutch perch pivot boot over the screw and lock ring.

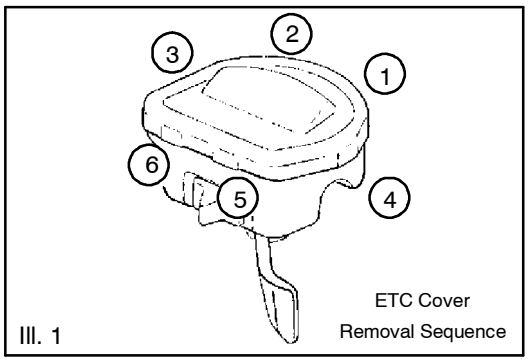
THROTTLE INSPECTION

Check for smooth throttle opening and closing in all handlebar positions. Throttle lever operation should be smooth and lever must return freely without binding.

1. Place the gear selector in neutral.
2. Set parking brake.
3. Start the engine and let it idle.
4. Turn handlebars from full right to full left. If idle speed increases at any point in the turning range, inspect throttle cable routing and condition. Adjust cable tension as needed until lock-to-lock turning can be accomplished with no rise in engine rpm.
5. Replace the throttle cable if worn, kinked, or damaged.
6. Inspect ETC cover seal and switch cavity by removing the cover. Verify that no dirt, water or mud is present.

To remove the ETC cover:

1. Use a medium flat blade screwdriver and insert blade into the pocket of the cover starting on the #1 position.
2. Twist screwdriver slightly while lifting on the cover to release snap.
3. Repeat procedure at the other five locations as shown.
   NOTE: Do not attempt to remove cover until all latch points are released.



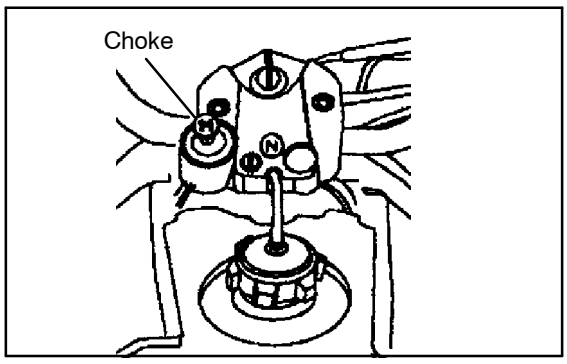
Ill. 1 ETC Cover Removal Sequence

CHOKE (ENRICHER) ADJUSTMENT

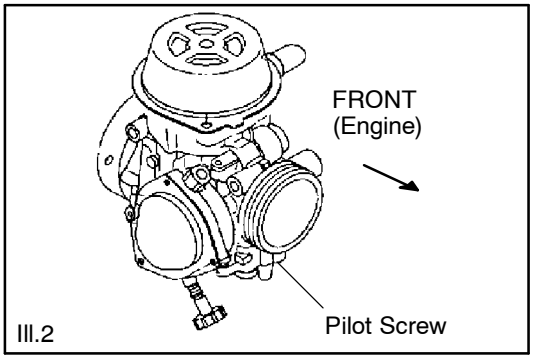
If the choke knob does not stay out when pulled, adjust the choke tension by tightening (clockwise) the jam nut under the rubber boot between the choke knob and nut. Firmly grasp the rubber boot and tighten until the choke slides freely but stays out when pulled.

Verify free play of 1/16-3/16” (1.6-4.76 mm) and smooth operation of choke cable.

If smooth choke operation is not obtainable, inspect choke cable for kinks or sharp bends in routing.



CARBURETOR PILOT SCREW ADJUSTMENT



Ill.2

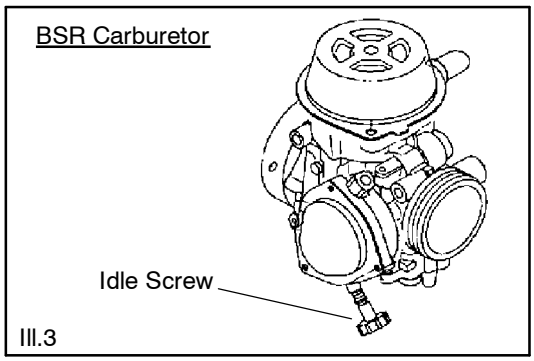
NOTE: Pilot screw is covered by a welsh plug. Plug removal will be required to perform these procedures.

1. Start engine and warm it up to operating temperature (about 10 minutes).
2. Turn pilot screw in (clockwise) until *lightly* seated. Turn screw out the specified number of turns. NOTE: Do not tighten the pilot screw forcefully against the seat or the screw and/or seat will be permanently damaged. (Ill. 2)

Pilot Screw Adjustment
Refer to Specifications in Chapter 1

3. Connect an accurate tachometer that will read in increments of + or – 50 RPM such as the PET 2100DX (**PN 8712100DX**) or the PET 2500 (**PN 8712500**).
4. Set idle speed to 1600 RPM. Always check throttle cable freeplay after adjusting idle speed and adjust if necessary.
5. Slowly turn mixture screw clockwise using the pilot screw wrench until engine begins to miss.
6. Slowly turn mixture screw counterclockwise until idle speed increases to maximum RPM. Continue turning counterclockwise until idle RPM begins to drop.
7. Center the pilot screw between the points in Step 5 and 6.
8. Re adjust idle speed to specification.

IDLE SPEED ADJUSTMENT



Ill.3

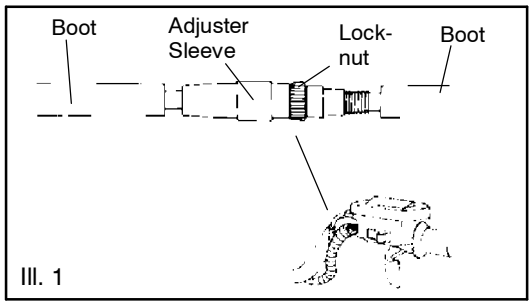
1. Start engine and warm it up thoroughly.
2. Adjust idle speed by turning the idle adjustment screw in (clockwise) to increase or out (counterclockwise) to decrease RPM. (Ill.3)

NOTE: Adjusting the idle speed affects throttle cable freeplay and electronic throttle control (ETC) adjustment. Always check throttle cable freeplay after adjusting idle speed and adjust if necessary.

Idle Speed:
1600 +/- 50 RPM

THROTTLE CABLE / ELECTRONIC THROTTLE CONTROL (ETC SWITCH) ADJUSTMENT

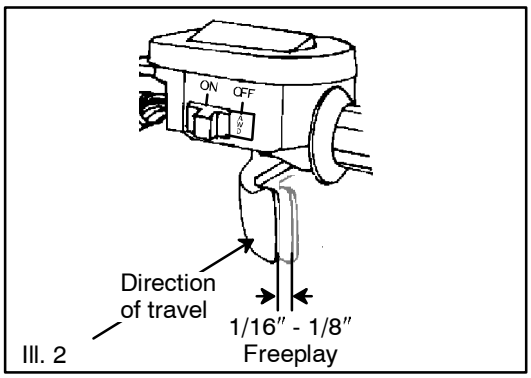
1. Slide boot off throttle cable adjuster and jam nut.
2. Place shift selector in neutral and set parking brake.
3. Start engine and set idle to 1600 RPM.



Ill. 1

NOTE: Be sure the engine is at operating temperature. See Idle Speed Adjustment.

4. Loosen lock nut on in-line cable adjuster (Ill. 1).
5. Turn adjuster until 1/16″ to 1/8″ freeplay is achieved at thumb lever. (Ill. 2). After making adjustments, quickly actuate the thumb lever several times and reverify freeplay.



Ill. 2

6. Tighten lock nut securely and slide boot completely in place to ensure a water-tight seal.
7. Turn handlebars from left to right through the entire turning range. If idle speed increases, check for proper cable routing. If cable is routed properly and in good condition, repeat adjustment procedure.

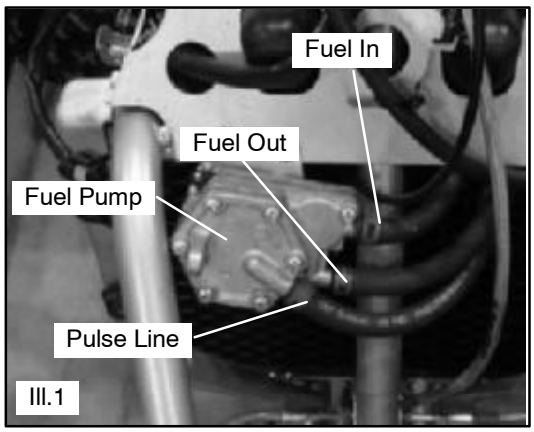
FUEL SYSTEM

⚠ WARNING

Gasoline is extremely flammable and explosive under certain conditions.

- Always stop the engine and refuel outdoors or in a well ventilated area.
- Do not smoke or allow open flames or sparks in or near the area where refueling is performed or where gasoline is stored.
- Do not overfill the tank. Do not fill the tank neck.
- If you get gasoline in your eyes or if you swallow gasoline, seek medical attention immediately.
- If you spill gasoline on your skin or clothing, immediately wash it off with soap and water and change clothing.
- Never start the engine or let it run in an enclosed area. Engine exhaust fumes are poisonous and can result loss of consciousness or death in a short time.
- Never drain the float bowl when the engine is hot. Severe burns may result.

FUEL LINES



1. Check fuel lines for signs of wear, deterioration, damage or leakage. Replace if necessary.
2. Be sure fuel lines are routed properly and secured with cable ties. CAUTION: Make sure lines are not kinked or pinched.
3. Replace all fuel lines every two years.

VENT LINES

Check engine, fuel tank, oil tank and carburetor vent lines for signs of wear, deterioration, damage or leakage. Replace every two years.

Be sure vent lines are routed properly and secured with cable ties. **CAUTION:** Make sure lines are not kinked or pinched.

FUEL VALVE

The Predator fuel system strains the fuel through screens located in the fuel valve. There is no fuel filter to service. To service the fuel valve:

1. Shut off fuel supply at fuel valve. Remove line clamps and fuel lines from the tank.
2. Remove the tank and drain remainder of fuel into a appropriate container.
3. Remove fuel valve by loosening the screws holding the valve to the tank.
4. Inspect the valve for damage or debris. Replace the valve if problems are found.

5. Reverse the procedures to install the fuel valve.
6. Start engine and inspect for leaks.

CARBURETOR DRAINING

The carburetor float bowl should be drained periodically to remove moisture or sediment from the bowl, or before extended periods of storage.

NOTE: The bowl drain screw is located on the bottom left side of the float bowl.

1. Turn fuel valve to the off position.
2. Place a clean container beneath the bowl drain spigot or bowl drain hose.
3. Turn drain screw out two turns and allow fuel in the float bowl and fuel line to drain completely.
4. Inspect the drained fuel for water or sediment.
5. Tighten drain screw.
6. Turn fuel valve to "ON".
7. Start machine and check for leaks.

NOTE: All tubes attached to the carburetor must be check for pinching or blockage, as this will effect engine performance.



Ill. 1

COMPRESSION TEST

NOTE: This engine has built-in decompression components. Compression readings will vary in proportion to cranking speed during the test. Average compression (measured) is about **85-90 psi @ 400 RPM** during a compression test.

A smooth idle generally indicates good compression. Low engine compression is rarely a factor in running condition problems above idle speed. Abnormally high compression can be caused by carbon deposits in the combustion chamber or worn, damaged exhaust cam lobes. Inspect camshaft and combustion chamber if compression is abnormally high.

A cylinder leakdown test is the best indication of engine condition. Follow manufacturer's instructions to perform a cylinder leakage test. (Never use high pressure leakage testers, as crankshaft seals may dislodge and leak).

Cylinder Compression w/ decompression

Standard: 85-90 PSI @ 400 RPM

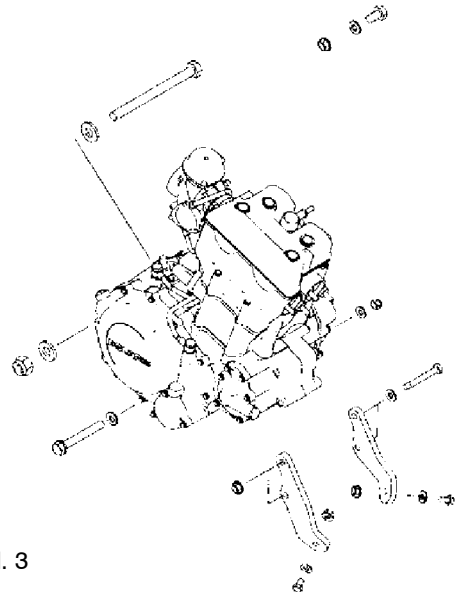
Cylinder Leakdown

Service Limit 10 %
(Inspect for cause if leakage exceeds 10%)

ENGINE MOUNTS

Inspect engine mounts and frame for cracks or damage. (Ill.3)

Check engine fasteners and ensure they are tight.



Ill. 3