

# TROUBLESHOOTING & SERVICING FUEL SYSTEMS



## Fuel System Troubleshooting

### Fuel Recommendations:

- Fresh, clean, regular unleaded gasoline
- Do not store longer than 30 days untreated
- For long storage periods use fuel stabilizer, such as Tecumseh Ultra-Fresh™
- Store in clean, approved, plastic gas can



## Fuel System Troubleshooting

### Ultra-Fresh™ Fuel Stabilizer

- Keeps fresh gasoline fresh for more than 24 months
- Reduces harmful emissions caused by old gasoline
- Non-flammable, non-toxic, non-staining
- Prevents gum and varnish formation
- Tecumseh Part #740063A



## Fuel System Troubleshooting

### What to Look For

- Clogged Passageways (stale gasoline, debris, oxidation)
- Leaking/Missing Idle Welch Plug
- Missing/Damaged O-Rings
- Damaged/Improperly Installed Needle/Seat/Float/Spring
- Improperly Installed Shutters/Plates



## Fuel System Troubleshooting

### Stale Gasoline

- Dark color
- Strong odor
- Feels room temperature



## Fuel System Troubleshooting

### Gum & Varnish

- Caused by stale gasoline



## Fuel System Troubleshooting

### Water in gasoline

- Water settles below fuel
- Can block fuel metering passages



## Fuel System Troubleshooting

- Exclusive Tecumseh Kleen-Fuel™ System
- Traps water and debris in the fuel tank
- Helps keep fuel system free of contamination



## Fuel System Troubleshooting

### Oxidation

- Water attacks aluminum and can cause oxidation destroying carburetor
- White scaly or powdery appearance



## Fuel System Troubleshooting

### Will cleaning remove oxidation on the carburetor body?



**NO**  
Once oxidation has started, the carburetor body must be replaced.



## Fuel System Troubleshooting

### Crushed Float

- Caused by
  - water freezing in carburetor
  - blowing compressed air into fuel inlet without first removing the bowl




## Fuel System Troubleshooting

### Dirt Ingestion

- Caused by:
  - poor air filter maintenance
  - damaged gaskets
  - worn choke or throttle shaft
- Can lead to:
  - Worn needle & seat
  - Worn hinge pin



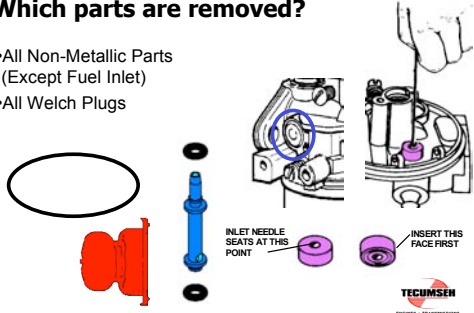
# Fuel System Cleaning Procedures



## Cleaning Procedures


### Which parts are removed?

- All Non-Metallic Parts (Except Fuel Inlet)
- All Welch Plugs



INLET NEEDLE SEATS AT THIS POINT

INSERT THIS FACE FIRST



## Cleaning Procedures

- Recommend the use of Tecumseh Carburetor Tool #670377
- Makes your life easier






## Cleaning Procedures

### Remove Float Shaft





## Cleaning Procedures

### Remove Emulsion Tube






## Cleaning Procedures

### Remove Emulsion Tube



### Remove O-Ring





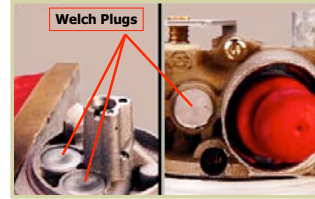
## Cleaning Procedures

Remove Inlet Needle Seat



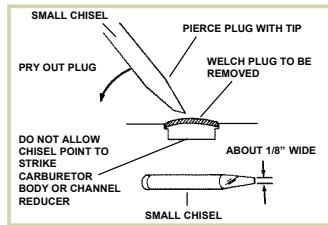
## Cleaning Procedures

Remove Welch Plugs



## Cleaning Procedures

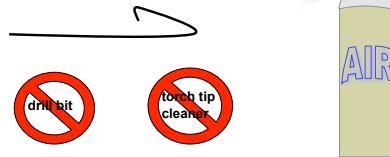
Remove Welch Plugs



## Cleaning Procedures

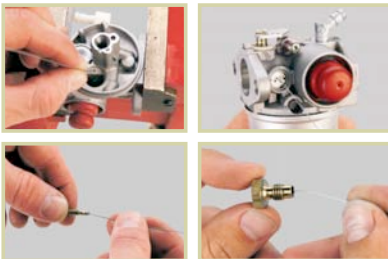
### How do I Clean the Passages?

Soft Tag Wire & Compressed Air



## Cleaning Procedures

Probe metering passages with tag wire



## Cleaning Procedures

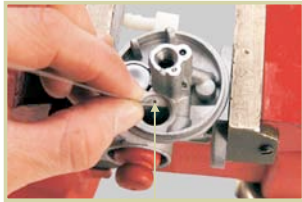
Use Carburetor Spray Cleaner



Emissions Carburetors  
Should Not Be Soaked



## Cleaning Procedures



Non-Metallic Jet in Extended Prime Well can be damaged if soaked



## Vent Tube Installation Tip



Tool P/N 670343



Remove tube when cleaning



## Adjustment Procedures

Float - Use Carb Tool #670377 and Adjust Tab



## Adjustment Procedures

Adjust Tab To Set Float Height



## Service Procedures

Refer to Tecumseh publication #695907 Carburetor Identification, Troubleshooting and Service Book

