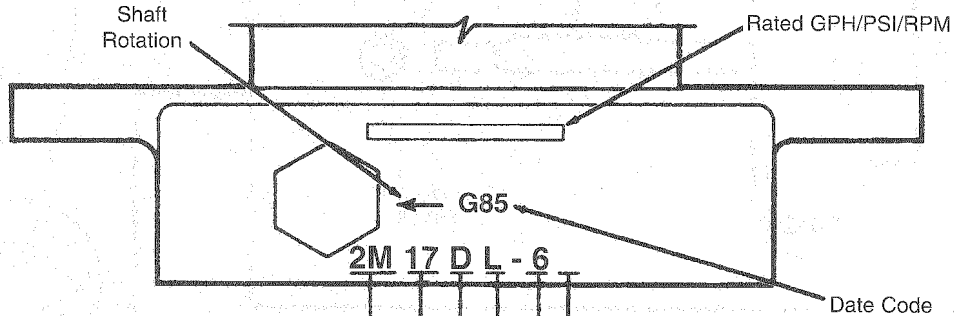


Replacement Parts List, Service Instructions and Code Analysis

A Division of Capital City Tool, Inc

"M" and "2M" Series Fuel Units



M	Single Stage
2M	Two Stage

Motor Speed

Code	RPM
17	1725
34	3450

Rated Pressure

All Except Design Series "K"	
No Digit	100 PSI Rated Pressure
Design Series "K"	
No Digit	150 PSI Rated Pressure

Rotation and Nozzle Location (From Shaft End)

Code	Rotation	Nozzle
C	Counter Clockwise	Left
D	Clockwise	Right

Max. Recommended Fire Size at Rated Pressure

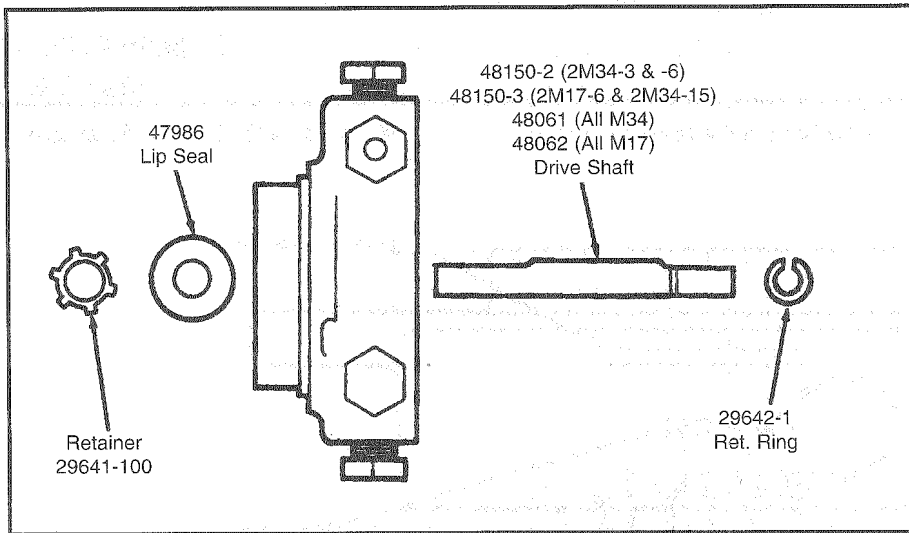
Code	Max. Fire
3	3 GPH
6	6 GPH
15	15 GPH

Design Series

Code	Design Change
None	Steel Cover & Key Drive (Obsolete)
A	Aluminum Cover & Key Drive (Obsolete)
B	"D" Gear Drive, Face Seal (Obsolete)
C	"D" Gear Drive with special Body & Piston, Face Seal (Obsolete)
D	"D" Gear Drive & Lip Seal (Obsolete)
E	"D" Gear Drive & Lip Seal with Special Body & Piston (Obsolete)
F	Same As "D" Except Revised Porting
H	Same As "F" Except O-Ring Press. Adjus.
J	Same As "H" Except Revised Internal Valving**
K	Same as "J" Except Relocation Of Vent And By Pass Plug
L	Same As "K" Except Revised Porting

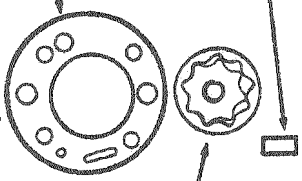
**On J body do not immerse in solvents so as to prevent damage to synthetic internal parts.

Lip Seal Units (Design Series "D" and Up)



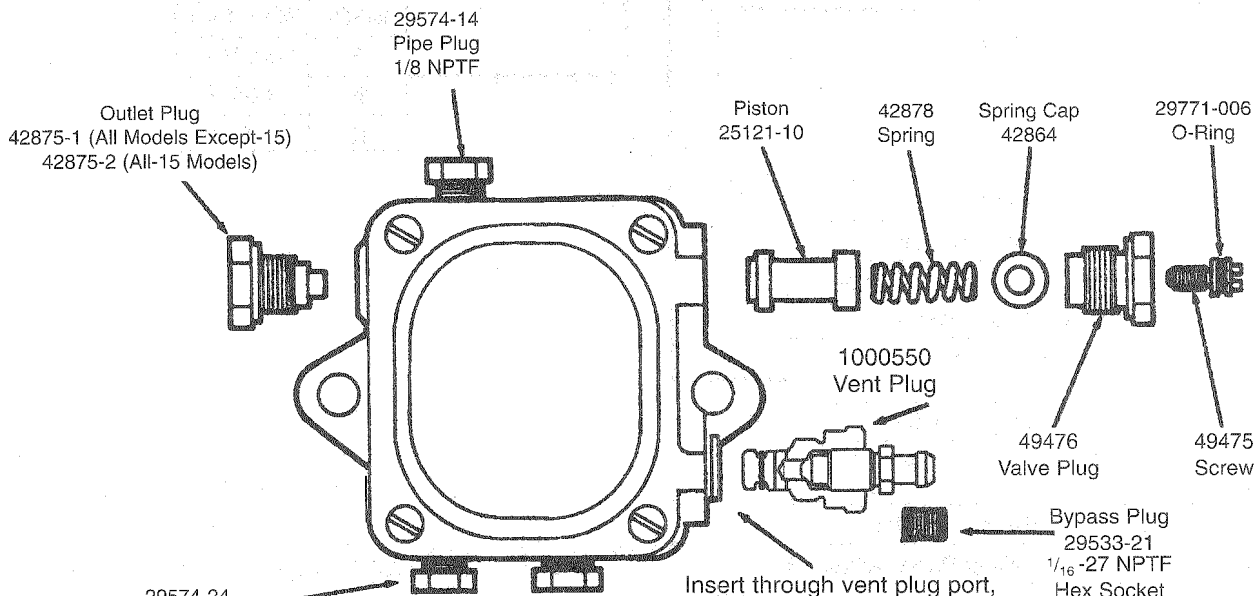
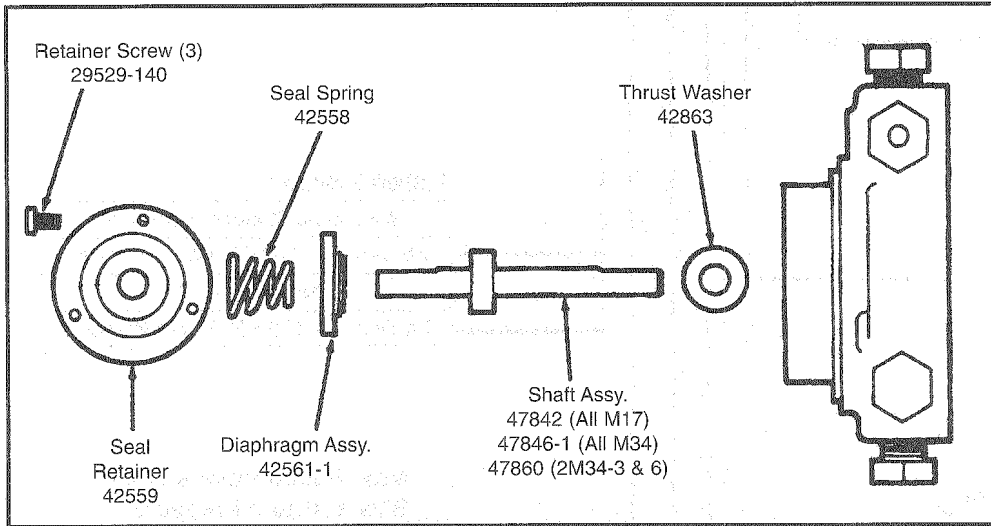
Pressure Gear Plate
 24818-3 (M17-6 & -15)
 19859-5 (M34-3-6-15 & 2M34-15)
 19859-3 (2M17-6)
 42639-1 (2M34-3 & -6)

Dowel Pins (2)
 19860-1 (M17-6 & 15)
 20149-1 (M34-3-6 & -15)
 20149-1 (2M17-6)
 20149-7 (2M34-15)
 20149-14 (2M34-3 & -6)

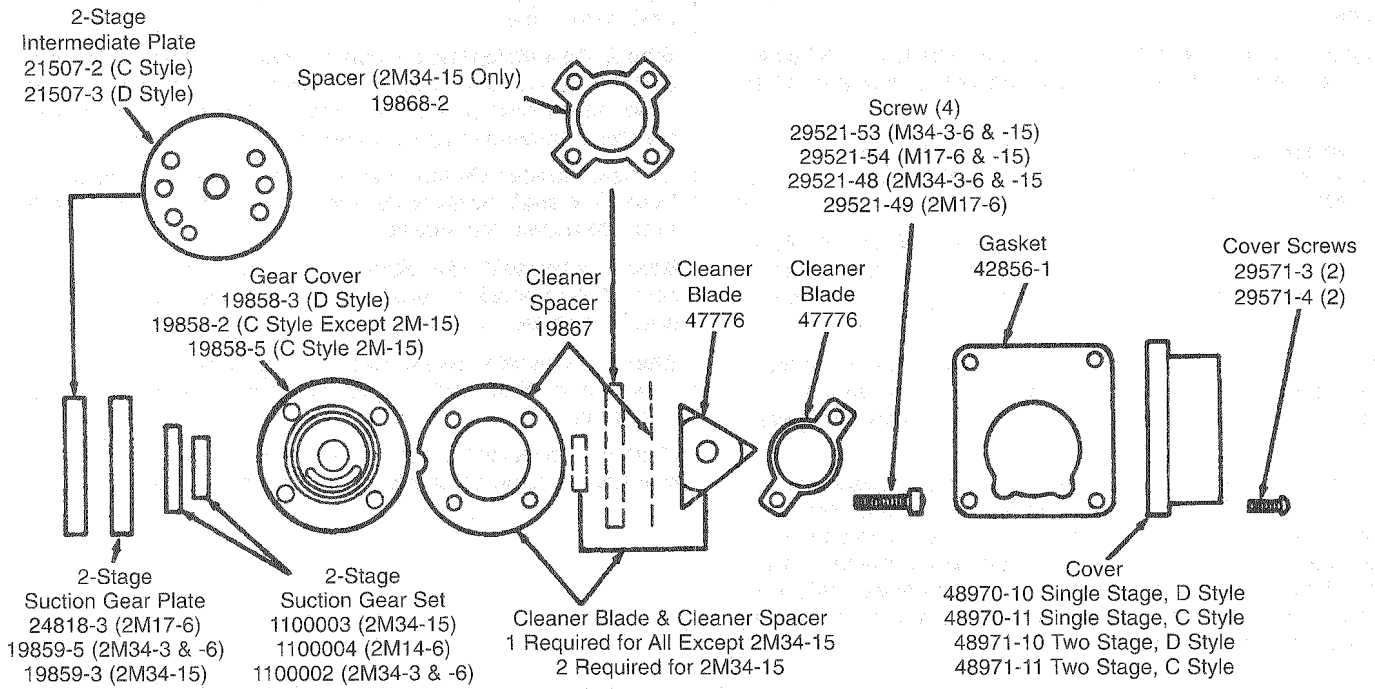


1100002 (All M34 & 2M34-15)
 1100003 (2M17-6)
 1100004 (M17-6 & -15)
 1100001 (2M3403 & -6)
 Pressure Gear Set

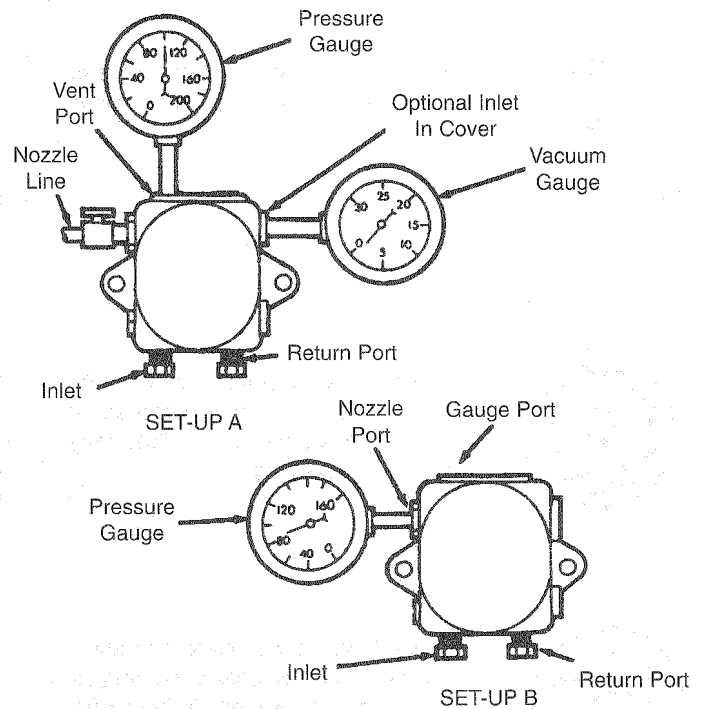
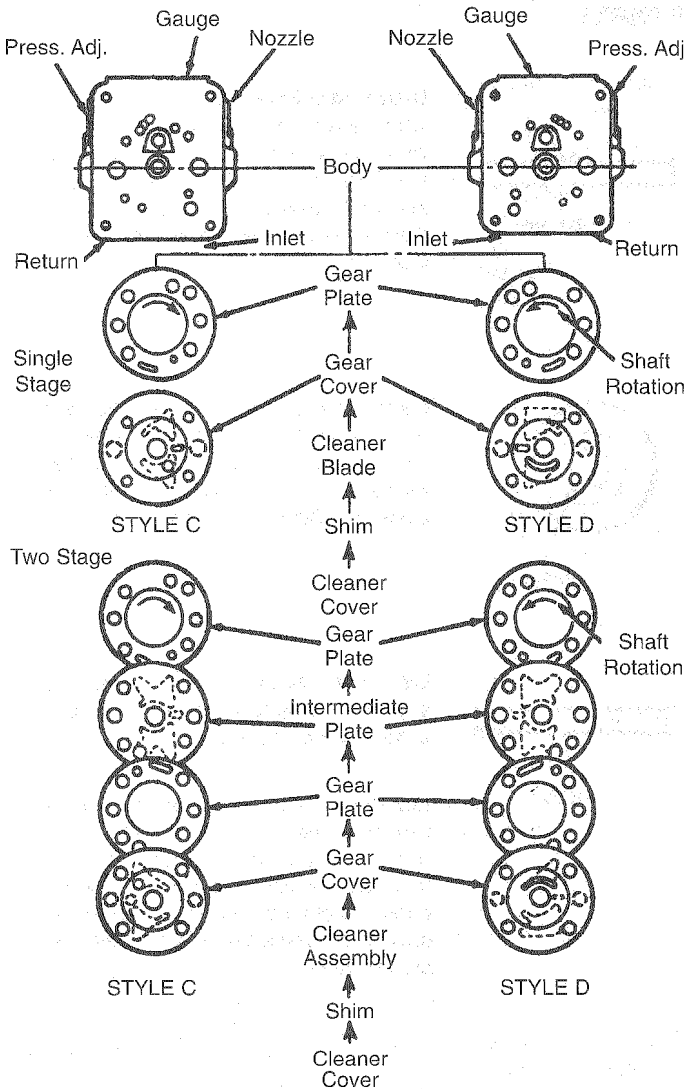
Face Seal Units (Design Series "B" & "C") "Old Style"



Insert through vent plug port, all 2 stage, and all units design series "K" and up, to set unit for 2 pipe operation.



SIMPLIFIED TEST SET-UP



“D” STYLE PUMPS SHOWN—“C” STYLE OPPOSITE

Test All Units with By-Pass Plug Installed for Two Pipe System

Delivery and Vacuum Test — Set-Up A Above

1. Set pressure adjusting screw to required pressure.
2. Measure nozzle delivery at set pressure.
3. Close inlet valve to check vacuum.

Cut-Off Test—Set-Up B Above

1. Set pressure at 100 PSI.
2. Shut off motor. Pressure should hold at 80% or above of rated pressure. If pressure drops to 0 PSI, cut off leaks.

DISASSEMBLY

Step 1: Plug all ports and wash exterior of pump with mineral spirits.

Step 2: Remove Valve Section (see page 2). Use $13/16$ box or open end wrench to remove valve adjusting plug and outlet plug.

Caution: Be sure to remove or loosen the adjusting plug to relieve spring pressure from the piston seat before loosening the outlet plug.

Step 3: Remove Gear Section (see pages 4 and 5). After removing cover screws tap the side of front cover with a plastic hammer as this cover has a tendency to adhere to the body.

Step 4: Remove Seal Section. After the three retainer screws have been removed all parts except the thrust washer will come out by pulling on the drive shaft on diaphragm seal units.

On lip seal units, shaft must be removed from inside pump (after disassembling the gear stack). With shaft removed, retainer and seal can be pried out with screwdriver if replacement is necessary. Care must be taken not to scratch the hub bore while prying out seal. Do not remove seal if it is performing satisfactorily. Once seal is removed, it will be distorted and must be replaced.

ASSEMBLY

Step 1: Wash all parts with mineral spirits and be sure your work area is clean

Step 2: Assemble Seal Section. Lubricate seal face with drop of clean light oil and install with seal face down against seal nose. Install seal spring with small end against seal. Install retainer with raised ring down against seal.

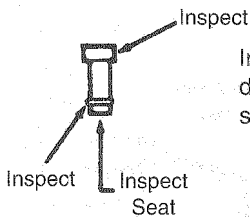
Lip seal models: Oil the seal lips before inserting the shaft. Rotate the shaft slowly while forcing shaft flat thru the seal to avoid damaging the seal lips.

Step 3: Assemble Gear Section. Refer to preceding page for correct plate position. Rotate drive shaft when tightening the gear coverplate screws to insure optimum alignment.

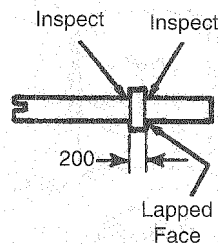
Step 4: Assemble Valve Section. D style outlet in right port as viewed from shaft end. C style outlet in left port as viewed from shaft end.

Step 5: Operationally test in accordance with normal test procedures. (See preceding page for simplified test set-up.)

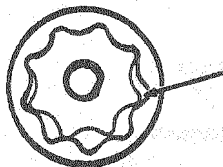
INSPECTION OF PARTS



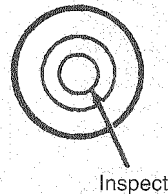
Inspect piston assembly for wear or damage to the seat and points shown.



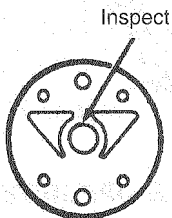
Diaphragm Seal Units: Inspect drive shaft assembly for wear on both sides of seal nose. Seal nose face must be relapped before assembling into unit. Use 25199-2 lapping tool. Replace shaft if seal nose worn more than .040.



Inspect gear assembly for wear by checking to see how well the gears mesh. Clearance over .002 may cause low delivery.



Inspect diaphragm assembly for damage to rubber part and wear on the lapped surface. If the slightest amount of wear appears on the lapped surface replace the part.



Inspect gear cover plate and intermediate plate for wear or scoring on face. Inspect cleaner blade tips for wear and flatness.



Lip Seal Units: Consider replacing shaft if there is wear in the area contacted by the seal lips.

Lip Seal: Replace if leaking. If seal rubber is swelled or softened, suspect chemical contaminants in fuel. If rubber is firm but lips are worn, check pumping system for excessive inlet pressure and/or abrasive contamination.

Webster®

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