DEPARTMENT OF TRADE AND COMMERCE
STANDARDS BRANCH

S.WA-600

OTTAWA, July 15,1966.

APPROVED: AUTOMOTIVE OIL DISPENSING METERS Models C-3680-B, C-3685-CB and C-3688-C manufactured by Stewart-Warner Corporation of Canada Limited, Belleville, Ontario.

Model No.	Description
C-3680-B (for gear oil)	Same as model 3689-C on SD-WA.281, except that the dial capacity is 8 pints and there is only one indicator. Meter elements are of Stewart-Warner manufacture.
C-3685-CB (for motor oil)	A slight change in appearance from previously approved models, including the 3680-B and 3688-C on this circular, as it is the first model approved using Badger metering elements rather than those of Stewart-Warner manufacture. Outer dial 0 to 4 quarts, subdivided into pints, inner dial 0 to 16 quarts, totalizer 4 digit for capacity of 9999 quarts.
C-3688-C (for ATF)	Same as model 3686-C on SD-WA.314, except it does not have a totalizer. Outer dial 0 to 4 quarts subdivided into pints, inner dial 0 to 16 quarts in quarts. Metering elements of Stewart-Warner manufacture.

Rating of Apparatus: Maximum 4½ gpm and minimum ½ gpm for all models.

Application: Dispensing gear oil, motor oil and automatic transmission fluid in retail trade.

Conditions: The pump supplying oil to the meter must be equipped with a float valve which will close and stop the pump from drawing liquid before the liquid level is low enough for air to be entrained, or some other equally effective device in lieu of a float valve. All nozzles must be equipped with anti-drain valves or their equivalent, and all pumping units with non-return check valves to keep the hose under pressure and prevent air from being drawn in backwards through the meter under certain conditions of operation.

Description: The meters employ the oscillating-piston type metering element. Mechanical clearances are kept small so that a meter in tolerance on SAE 10 oil will be in tolerance also on SAE 90 oil and, of course, on the various grades in between.

Testing: The standard tests for a small capacity meter shall apply.

Reference: SW-85-S1
SL-102-233 (These devices have been approved by letter for several years)

Note: Approval is granted under the Weights and Measures Act, Chapter 292, and Regulations thereunder (P.C. 6894) for use in Canada under the general conditions of P.C. 6894, and under any special conditions listed above.

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TYPICAL PUMPS USED WITH STEWART WARNER AUTOMOTIVE OIL DISPENSING METERS WITH MEANS FOR PREVENTING PUMPING OF AIR

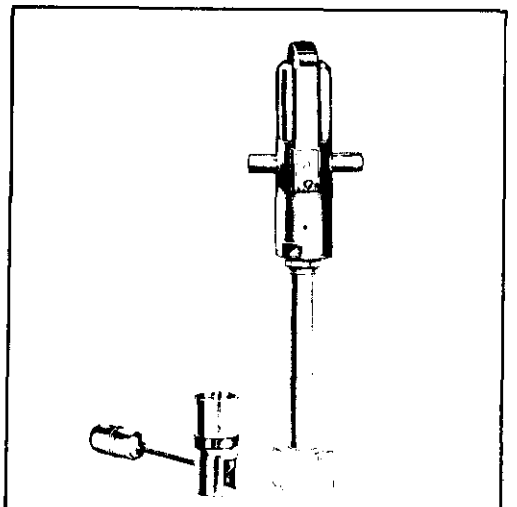

FIG. 1 - MODEL 8568-R L.P. SUCTION PUMP

DESCRIPTION

The Model 8568-R Low Pressure Suction Pump is designed to pump meter oil from underground tanks. Model 8568-AR pump is identical to Model 8568-R, but comes equipped with a bung adaptor. This enables the pump to be used on an accessible bulk tank of the 275 gallon storage capacity type. This medium duty pump is capable of delivering motor oil thru systems where supply lines are of some length between storage tanks and hose reel or other bulk oil service outlets.

Low Level Cut-off Valve G-321206 is available as an accessory for both pumps. This float actuated valve will shut off when the oil level drops too low, assuring a constant prime and preventing the pumping of air through the metered outlets.

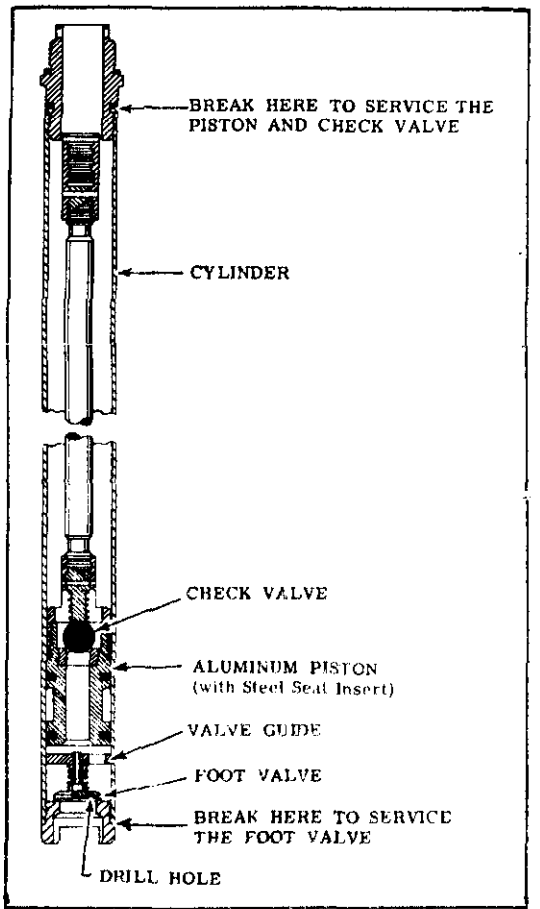

FIGURE I - CUTAWAY OF "H" AND "SUPER H" LOW PRESSURE PUMP TUBE ASSEMBLIES

Model	Description
398484	"H" and "Super H" low pressure pump tube assembly for use with 120 pound drums.
398486	"H" and "Super H" low pressure pump tube assembly for use with 400 pound drums.

The "H" and "Super H" low pressure pump tube assemblies are designed to dispense lubricant directly from the original drum.

These "H" and "Super H" low pressure pump tube assemblies have a spring loaded ball check in the piston and a spring loaded foot valve.

The low pressure pump tube assemblies are easily serviced as the entire mechanism can be serviced without removing the head.

II. PRINCIPLES OF OPERATION

At the start of the up-stroke the ball check in the piston closes, lifting the lubricant above the piston out into the lines. At the same moment the ball check closes, the foot valve opens, admitting lubricant into the cylinder.

At the start of the down stroke, the foot valve closes and any air which may have entered the cylinder is expelled through the small drill hole in the foot valve. The lubricant pressure opens the ball check in the piston. Lubricant flows through the piston into the cylinder above the piston. When the piston reaches the bottom of the down stroke, the cycle is repeated again.