



DETROIT
LUBRICATOR
COMPANY



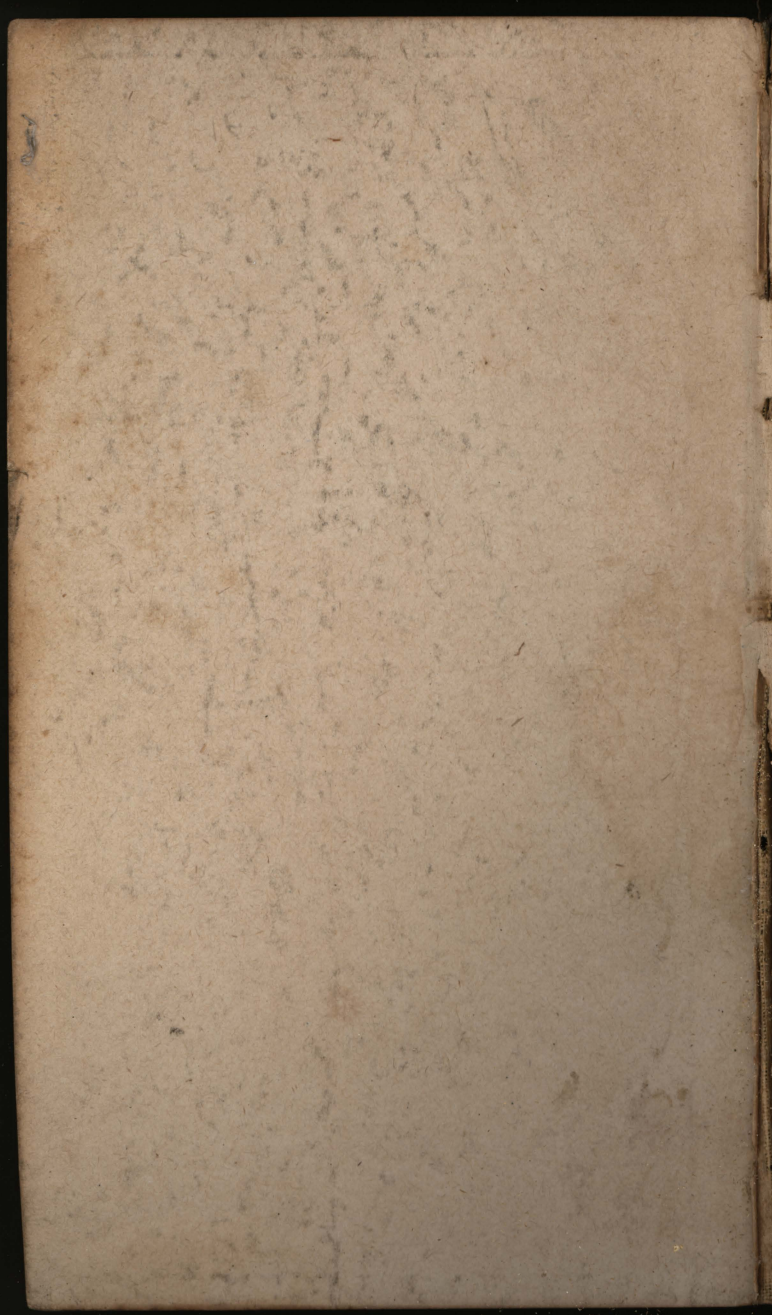
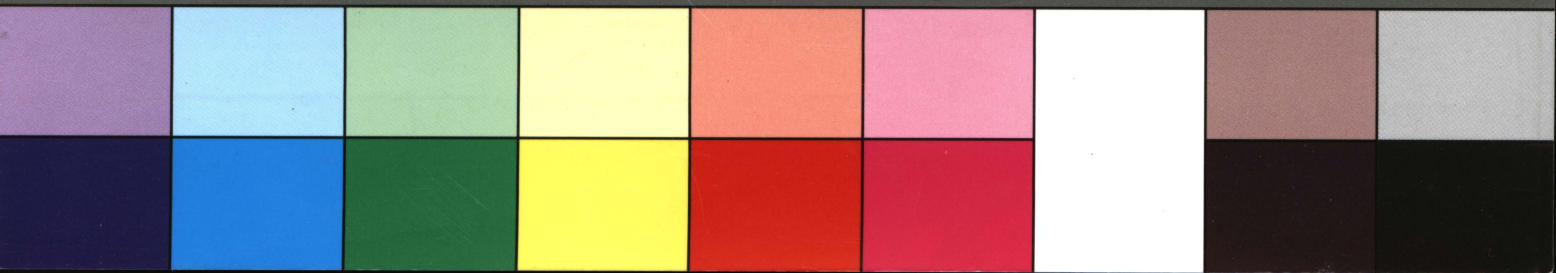
"Genuine
Detroit"

Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

TIFFEN® Color Control Patches

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Blue Cyan Green Yellow Red Magenta White 3/Color Black



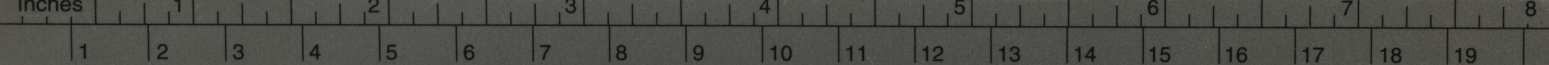
CATALOG No. 43
1921

DETROIT LUBRICATOR COMPANY

Established 1877

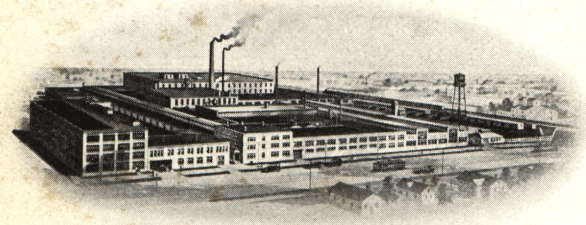
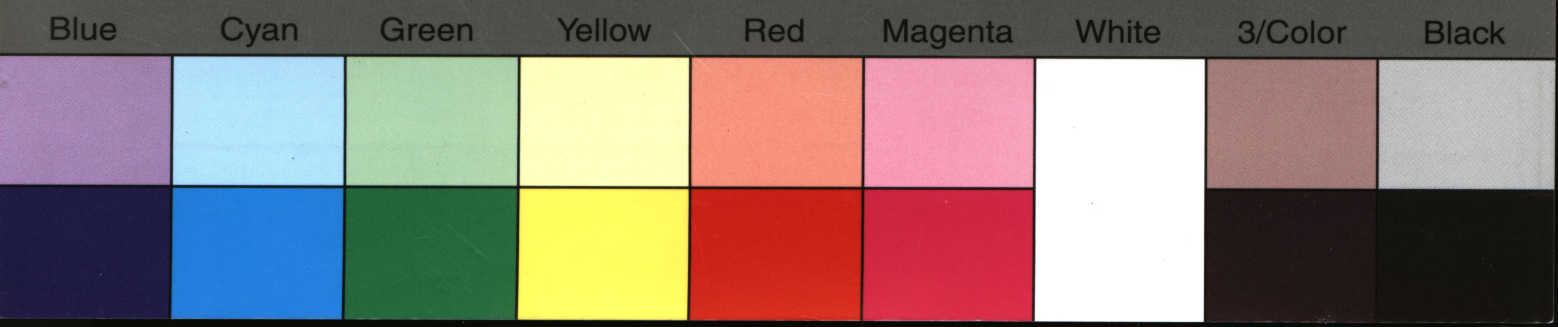


Main Offices and Works
5842 to 5986 TRUMBULL AVE.
DETROIT, U. S. A.



TIFFEN® Color Control Patches

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DETROIT LUBRICATOR COMPANY

OFFICES AND WORKS
TRUMBULL, LINCOLN, MARQUETTE & VIADUCT
DETROIT, U. S. A.

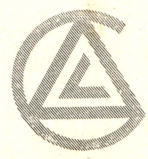
INTRODUCTION

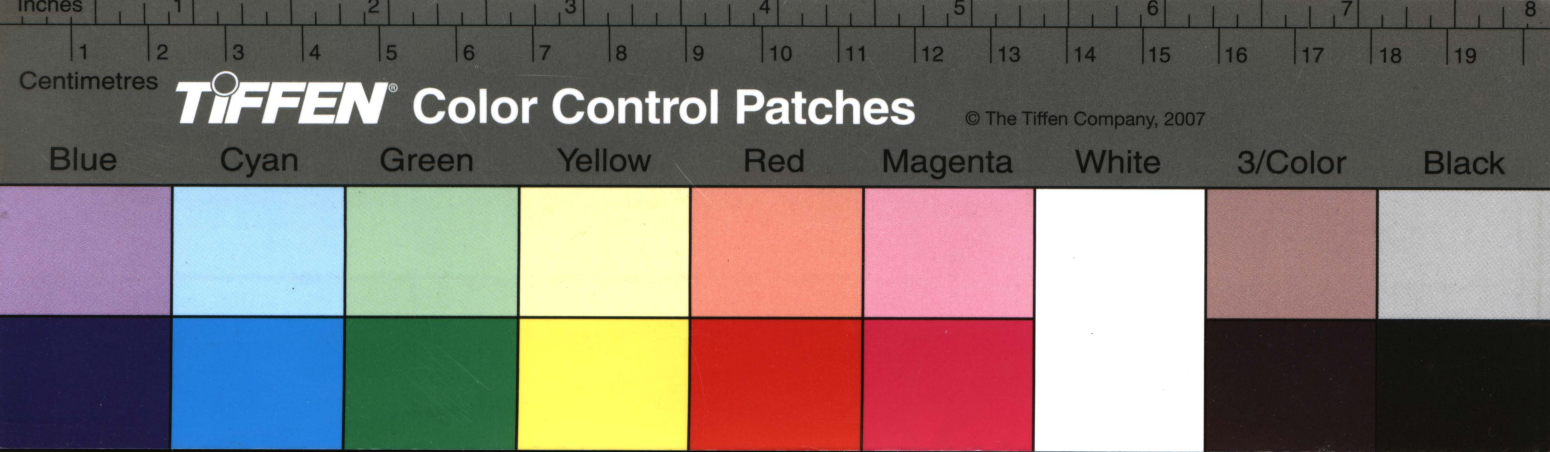
Detroit Lubricators for various kinds of service are standard throughout the world, and need no introduction. Our other products, Detroit Force Feed Oilers, Radiator Valves, Carburetors, etc., occupy an equally prominent position in their respective lines.

The goods we manufacture perform in many cases a service, the importance of which is out of all proportion to the cost. Through its failure to perform properly a poor lubricator or force feed oiler might easily result in serious damage to an expensive engine, locomotive or tractor, and might even cause loss of life.

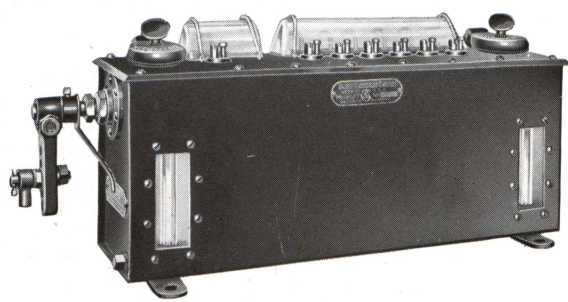
Realizing this, we manufacture with care, using great pains in our inspection of parts—discarding and destroying all that are not up to standard. This, and not price, establishes the proper basis by which our product should be judged.

Every article of our line bears our trade mark as a guaranty of satisfaction.





Detroit Force Feed Oilers
Model J T



Seven-feed Model J T Oiler with two compartments
(Patents Pending)

screen H, to intake pipe I and upper rear port F. This oil, by the downward stroke of plunger A, is then forced through lower rear port B into passage J and past ball check K. Still being under pressure, a certain amount of oil, as controlled by the feed adjustment needle, is forced through passage L and passage R and upward to sight feed tube S, dripping into oil pan D.

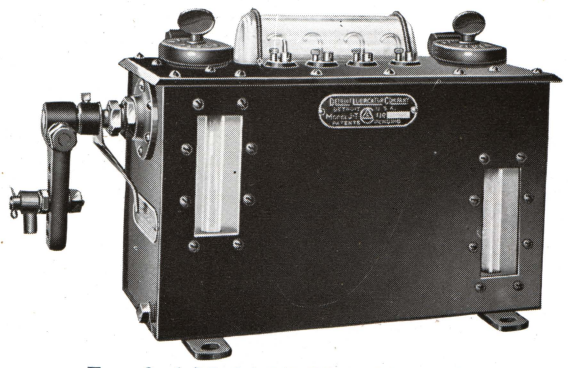
The surplus oil which does not pass the feed adjustment needle goes through passage N and is spilled back into the reservoir through small hole O in the top end of pressure tube.

The measured amount of oil which has been dropped into pan D continues down into chamber M. As the upward stroke of the plunger A creates a vacuum in chamber C, the oil will rush into same at the moment passage G is uncovered by plunger. From chamber C the oil is forced out through passage T, past needle valve U and through passage V to the point of lubrication.

General Arrangement

The Detroit Model JT Force Feed Oiler is made up with as many independent pumping units or headers as there are feeds required. These units are mounted inside the oil tank or reservoir. Certain standardized arrangements for driving the oiler are mounted on the tank, while lugs, straps or plates may be welded to the tank for suitably mounting or attaching the oiler to the engine.

Detroit Force Feed Oilers
Model J T



Four-feed Model J T Oiler with gravity discharge fuel pump.
(Patents Pending)

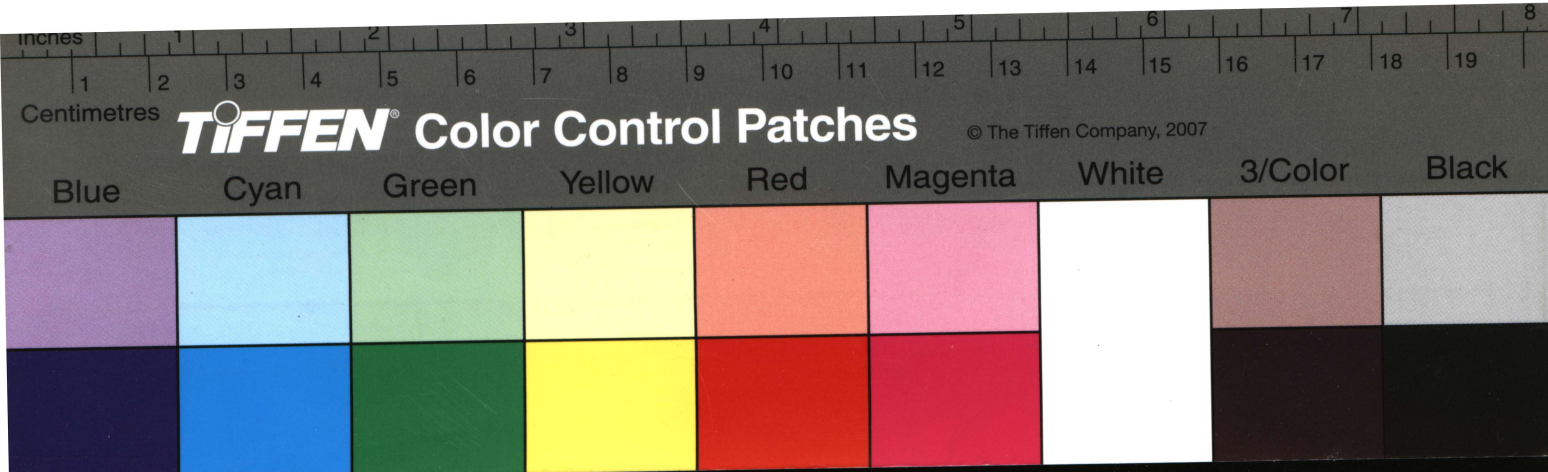
It is often desirable to handle two kinds of oil; for instance, one grade for cylinder lubrication and another for bearings or in the case of air compressors, one grade for air cylinders and another for steam cylinders. To meet these conditions, the Model J T oiler may, when so specified, be furnished with two compartments as illustrated on page 76, each compartment having independent filler caps, strainers and gauge glasses.

Direct Drive

The standard drive for the Model JT Oiler is of the direct oscillating type, as shown above. Power is applied by means of suitable connection with some moving part to the drive arm on the outside end of the pump shaft. This arm may be securely fastened to the shaft in the most convenient angular position. It is provided with a series of holes to take the connection pin. By this arrangement it is a simple matter to connect the oiler to drive it with the proper stroke.

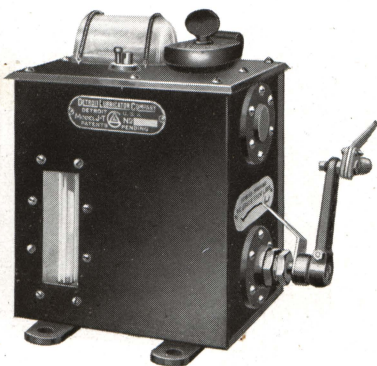
Speed for oscillating drive should be within the range of 50 to 400 r. p. m.

When specified, the oiler can be furnished with special rotary drive for use with pulley, sprocket



Detroit Force Feed Oilers

Model J T



Model J T Oiler with oscillating cam drive
(Patents Pending)

or gear. This is illustrated on page 81. The driving shaft is fitted inside the tank with an eccentric, strap and rod, giving proper vibratory motion to the pump shaft through a rocker arm on same.

Rotary drive speed should be within the range of 100 to 400 r. p. m.

When specified, the Model JT may be furnished with oscillating cam drive, as shown by the above illustration. The drive arm outside the tank derives its motion from some moving part of the machine to be lubricated in a manner similar to that described above under oscillating drive. With the cam drive, a certain minimum motion is required as shown by the stroke indicator, but excess travel on either end of the stroke will do no harm. This permits motion to be derived from parts having variable length of stroke and longer stroke than in the direct vibratory drive. The cam is carried by the drive shaft, and is located inside the reservoir. It is designed to work without lost motion in a yoke which, by means of a rod, connects to a rocker arm on the pump shaft.

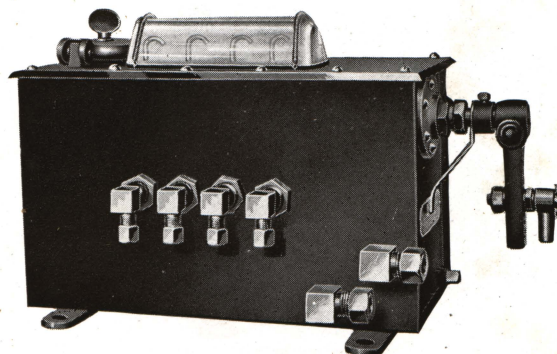
The cam drive speed should be within the range of 100 to 400 r. p. m.

Pump Mechanism

The pump shaft extends through the reservoir

Detroit Force Feed Oilers

Model J T



Four-feed J T Oiler with force discharge
fuel pump, showing lubricating feeds
and fuel connections.
(Patents Pending)

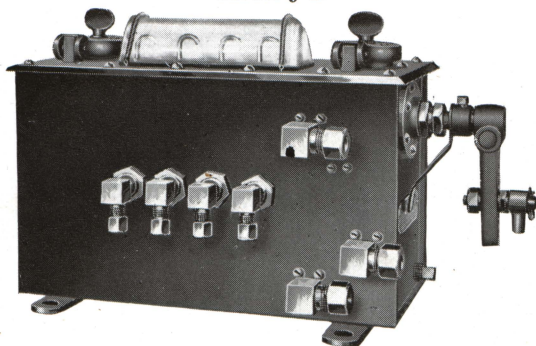
and is fitted with a simple rocker arm engaging each plunger. By this method, with both the direct oscillating and cam drive, the plungers operate in unison with the engine or the machine to which the oiler is connected. In other words, the plungers make a stroke for each reciprocation of the connecting rod. With the rotary drive, this simple application of power and comparatively quick stroke of the pump plunger is also obtained, but with the further advantage that by proper ratio of transmitting pulleys, sprockets or gears, the pump may be driven within proper range of speed from a moving part of the engine or machine to be lubricated that is running at a speed too fast or too slow for best results with the oiler.

It will be seen that this method of operating the plungers is positive, and at the same time, simple and rugged, devoid of springs and all interconnecting parts.

The pump consists of a single plunger, having a quick straight line reciprocating motion from the drive shaft as explained above. The plungers are well fitted and have long sealing laps which, with very quick motion, enable the oiler to develop high pressure and to deliver to the engine all the oil

Blue Cyan Green Yellow Red Magenta White 3/Color Black

Detroit Force Feed Oilers
 Model J T



Four-feed Model J T Oiler with gravity discharge fuel pump, showing lubricating feeds and fuel connections. (Patents Pending)

shown at the sight feed even at the slowest rates of oil feed.

Fuel Pump

The Model JT Detroit Force Feed Oiler may be equipped with fuel pump mounted in one end of the reservoir, and driven from the same shaft as the lubricating feeds. It is of the plunger type, with sufficient capacity to supply the engine.

This pump is made in different sizes, depending upon the fuel requirements of the engine. The fuel may be drawn from the supply tank placed in the base of the engine, underground, or in other safe and remote locations. In one type of pump the fuel is discharged into a separate compartment in the oiler and is thence fed by gravity to the motor. The pump handles a surplus of fuel and the compartment is supplied with an overflow pipe back to the tank, a certain amount of fuel always being in reserve in the reservoir to prime and start the engine.

In cases where the oiler is located below the fuel admission point on the engine, the pump is arranged to force its full discharge of fuel to the engine and the surplus is conducted back to the main supply by an overflow or by-pass arrangement.

These fuel handling devices combined with the lubricating feeds make a compact, safe and reliable

Detroit Force Feed Oilers
 Model J T



Model J T Oiler with Rotary Drive (Patents Pending)

method of handling both lubrication and fuel of the engine with one unit and a common drive shaft. It is obvious from the above description that the lubrication and fuel supply automatically start and stop with the engine and the rates of feed are thus proportioned to the engine speed.

Flushing Device

The Model J T Oiler may be optionally supplied with flushing device. This enables the operator, by simply pressing a button located beside the adjusting screw, to increase the rate of feed to the full pump capacity. This increase is maintained as long as the button is held down; when the button is released, the pump automatically resumes its normal rate of feed as adjusted. This feature, for the particular classes of service for which the Detroit J T Oiler is designed, is better than a hand crank or other arrangements which flush all feeds at once, for the reason that an excess of oil at certain points is undesirable and under some operating conditions one or two points may require momentarily a flush of oil to permit undue heating.

Disengaging Swivel

To supply lubrication before the engine or machine is started, which, in some cases, is desirable and is usually accomplished by a hand crank arrangement,