

PRO-PATCH

POTHOLE PATCHER

*Year-round economical solution to asphalt street problems.
Units available in 4.25 cubic yards, 5 cubic yards or 6 cubic yards.
LP gas fired, Diesel fired and ALL Electric Truck mounted units
Trailer models are only available with LP gas fired systems.*



H.D. INDUSTRIES, INC.

Pro-Patch Pot Hole Patcher

**P.O. BOX 8250, JACKSONVILLE, TEXAS 75766
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WEB SITE WWW.PRO-PATCH.COM**

PRO-PATCH ASPHALT POTHOLE PATCHER MODEL TCM 425-80, TCM 425-100 & TCM 425-160-DHE

The Pro-Patch Model TCM 425-80 is a truck mounted, unitized asphalt patching machine capable of making effective and permanent asphalt repairs under all weather conditions. Its unique design allows the machine to transport hot or cold asphalt pre-mix material and road oils at controlled heated temperatures. The unit's integral hydraulic system, driven by a power take-off, provides power to operate the machine's jack hammer, screw conveyor, oil pumps, asphalt agitator, and a variety of other hydraulic tools such as concrete and asphalt saws, tampers, water pumps, tree trimmers, etc.

The Pro-Patch machine is equipped with a hydraulically driven screw conveyor for dispensing asphalt pre-mix materials. This method eliminates dump beds, shoveling and wasting of materials. A hydraulically driven asphalt agitator shaft is built into the pre-mix hopper to break up asphalt bridging due to transporting and vibratory compaction.

The machine's hydraulic pavement breaker is more than efficient for cutting out potholes and asphalt failures. The hammer is also equipped with a tamper shoe for packing asphalt and base material.

The integral tack oil system is capable of working asphalt cut back road oils and emulsions. The hydraulically driven oil pump has forward and reverse capabilities. After spray sealing the repair area, simply reverse the pump to scavenge the spray wand and lines clean. A releasing agent tank is built into the unit to flush the system if necessary. This tank is also equipped with a pump and sprayer to clean asphalt tools and apply diesel or releasing agent in the asphalt pre-mix hopper.



TRAILER MODEL TM 425-100 DH



If moisture exists, a 200,000 BTU hand-held torch is supplied to dry the repair area.

During working hours, the Pro-Patch machine is heated by two each 150,000 BTU electronically-ignited propane burners. During non-working hours, a 230-volt built-in immersion heater provides the heat to store and maintain heated pre-mix asphalt materials.

The unit body is fully insulated with an industrial 2" high temperature insulation, and covered with a steel jacket. The insulating factor of this machine drastically reduces the use of heating fuel.

The LP gas burner and electric heating system is thermostatically controlled with a safety shut-off on the loss of flame or excessive temperatures.

H.D. Industries is licensed by the LP Gas division of the Railroad Commission of Texas. Our employees have been trained and tested according to State regulations, thus making the LP gas system offered on the Pro-Patch as safely designed as any household furnace.

In summation: the Pro-Patch provides all of the tools and materials necessary for a one or two man crew to make effective asphalt repairs, eliminating the use of air compressors, oil distributors, and dump trucks, which reduces the manpower equipment maintenance, and minimizes the amount of equipment used in high traffic areas.

The Pro-Patch, when properly utilized, will reduce the cost and increase the efficiency in street maintenance programs with 100% payback.

ASPHALT POTHOLE PATCHER SPECIFICATIONS MODELS

TCM 425-80-DHE, TCM 425-100-DHE AND TCM 425-160-DHE

1. GENERAL

The Pro-Patch is a unitized asphalt repair machine capable of making permanent asphalt repairs under most weather conditions.

2. BODY DIMENSIONS

The body is 112" long, 50" high and 78" wide. It has Diamond Tread safety step side fenders with two ladders, body assist handles. Body has L.E.D. style stop, turn, emergency flashers and side marker lights. The body has a lockable tool storage compartment measuring 83" long, 22" deep and 10" high. MUD FLAPS INCLUDED.

3. BODY INSULATION

The asphalt aggregate hopper and road oil tank are fully insulated with 2" high temperature 12R factor insulation encased in a double steel jacket. The top cover on the unit is an Optional double form fitted 2" insulated tarp with tie down brackets, capable of sustaining 500° F., OR Optional Hydraulic Operated Steel Top Doors.

4. CAPACITY

The asphalt aggregate hopper holds 4.25 cubic yards level full or 6 tons maximum load.

5. HEATING SYSTEMS

The body shall have a dry radiant heat chamber heated by 2 each 150,000 BTU retort tube propane burners with vertical exhaust stacks. Exhaust stacks have an automatic electronic dampner that opens when burners are fired and close when burners shut off to prevent heat loss. The burners are thermostat controlled and regulated at 10 PSI. The ignition system is 12 volt DC with electronic ignitor. Gas burner has a safety shut-off on loss of flame or excessive temperature. Automatic safety shut-off when diesel pump is operating. Burner has two stages, ignites on 10 oz. pressure, operates at 10 PSI, on high burn regulated by the same thermostat as the electric heater. Thermostats will be 0/300° F. solid state.

6. ELECTRONIC CONTROLS

All electronic controls will be solid state shock resistant. Thermostat for tack oil tank is 0/250° F. Thermostat for asphalt aggregate hopper is 0/300° F. Thermostat for the asphalt hopper has built in high limit safety shut down switch. Same thermostat controls the 12 volt LP Gas fired system and the 220 volt electric heating system.

7. EMULSION OIL TANK CAPACITY AND HEATING SYSTEM

The tank capacity is 80 to 150 gallons, depending on model, and has a double steel jacket with 2" insulation. The tank is equipped with a heat transfer system with an adjustable temperature valve that is capable of heating the emulsion oil to approximately 150° F., using the truck engine coolant system as the heat source. The emulsion pump and all lines are in an insulated heated area. The tank has 220 volt thermostat controlled dry well electric heater and a hot well for storing the spray wand in cold weather. Tank has an 8" fill spout and a 2" gate valve on tank drain. For ease of maintenance or change out of heater, tank does not have to be drained.

8. ELECTRIC HEATING SYSTEM

The asphalt aggregate hopper and liquid asphalt oil tank is heated by a 220 volt, 62 kw, NEMA 4 immersion heater, thermostat controlled with 25' of cord with ground fault interrupt system. The heating system is capable of maintaining heated material up to 300° F. during non-working hours.

9. FUEL OPTIONS

Optional 35 or 50 gallon frame mounted LP gas bottle with quick fill connector, 10 psi regulator and fuel sight gauge OR Optional 100 lb (25 gallon) removable propane bottle, complete with 10 PSI regulator.

10. TEMPERATURE GAUGES

The unit has two 3" dial type, stainless steel temperature gauges that constantly monitor the temperature of the asphalt hopper and road oil tank.

11. HAND TORCH

For drying off repair site and cleaning hand tools, the unit has a 200,000 propane BTU hand torch with shut-off valve and 10' of hose with hose rack. Hand torch has mounting bracket for transport.

12. LIQUID ASPHALT OIL PUMP

A hydraulically driven, 1 1/2" self priming, variable speed, reversible, rotary gear pump with relief valve. Operating at 20 GPM at 1200 RPM, 100 PSI. The pump will circulate the emulsion oil to prevent separation and to crush any lumps that may form and cause clogging of the spray tip. Air injection systems do not have this capability.

13. DIESEL / RELEASING AGENT STORAGE TANK

An 18 gallon capacity tank, equipped with a 12 volt DC pump and a hand sprayer for cleaning tools and unit. There shall be a connector valve for flushing road oil pump and lines and a 1" drain. For easy hopper cleaning access and to spray hopper before loading, units with a work deck shall have an additional front mounted spray wand with 3 ft. of hose.

14. PAVEMENT BREAKER

We offer optional; Stanley BR45, 72, 67 and 87 Pavement Breakers, complete with quick couplers, asphalt cutter, tamper and detachable shank with lockable transporting bracket.

15. LIQUID ASPHALT HAND SPRAYER

A 5' x 3/8" wand, equipped with fan nozzle and Deadman Control Valve. Sprayer hose is 15' x 1/2" with a reversible pump and diesel flush system for cleaning pump and lines.

16. HYDRAULIC PUMP

The pump is gear type, variable speed at 12 GPM and has an operating pressure of 2000 PSI at 900 RPM.

17. HYDRAULIC OIL RESERVOIR

30 gallon capacity with sight and temperature gauge, ventilated fill cap, 100 micron sump strainer and a 5 micron return filter.

18. HYDRAULIC OIL COOLER

A Thermal Dynamic eight tube Hydraulic Oil Cooler. The fan cooler operates on 12 volt DC and is thermostat controlled.

19. HYDRAULIC HOSE AND FITTINGS

All hoses and crimped fittings have a minimum of 8000 PSI burst pressure.

20. HYDRAULIC CONTROL VALVE

Five spool, two way, variable flow with 2000 PSI relief valve. The valve controls hydraulic screw conveyor, hydraulic doors, asphalt agitator, liquid asphalt pump and tool circuit. The valve has an internal or external safety design that will protect the operator and not allow the screw conveyor or asphalt agitator to operate when the doors are open. This system is designed to divert hydraulic oil pressure back to the tank. Electronic solenoids on hydraulic valve are not acceptable due to mechanical override feature and ease of bypassing system. The valve is operated from the rear of machine by remote levers. To reduce maintenance problems the main directional control valve stack has no electric solenoids.

21. SCREW CONVEYOR

The 10' long by 6" diameter progressive screw conveyor with hard surfaced flights welded continuously on 2" scheduled 80 pipe is ball bearing mounted and conveyor driven by a 9200 in.lb. torque variable speed hydraulic motor with forward and reverse capabilities. The delivery chute has 120° of pivot. All bearings can be greased through a feeder line mounted outside the unit from ground level.

22. ASPHALT AGITATOR

The agitator shaft is built into the premix hopper and designed to break up asphalt bridging due to vibratory compaction. The scheduled 80 shaft has 12 spikes and is ball bearing mounted and driven by a 9200 in.lb. torque variable speed hydraulic motor with forward and reverse. All bearings can be greased through a feeder line mounted outside the unit from ground level.

23. P.T.O.

The power take off unit is a Muncie or Chelsea Electric Over Air Shift or Hot Shift.

24. ELECTRONIC THROTTLE CONTROL

A two (2) or three (3) speed, depending on application, rear mounted remote switch allows operator more control over which speed and pressure each particular job requires. As a safety feature, the switch will not function unless the park brake is set on the vehicle.

25. COLOR

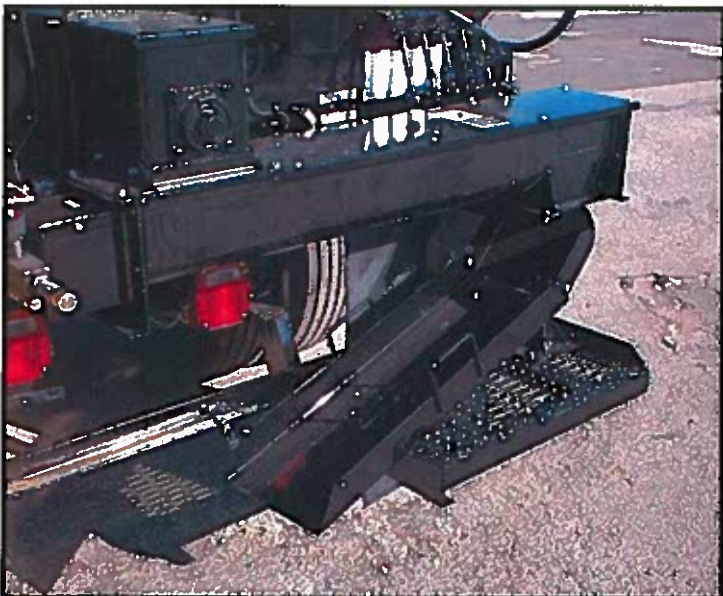
Customer's option, standard color is Omaha Orange.

26. SERVICE MANUALS AND TRAINING

H.D. Industries, will furnish two (2) parts, service and operators manuals with a three (3) day training program for each machine and delivery.

27. WARRANTY

H.D. Industries warrants the Pro-Patch Asphalt Pothole Patcher for a full twelve (12) months against defects in material and workmanship of the body and on all parts and labor. Labor applies to U.S. only.



U.S. PATENT NO. 5988935

U.S. PATENT NO. 4944632

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ASPHALT POTHOLE PATCHER OPTIONAL EQUIPMENT

1. SECONDARY AUGER MOTOR

A secondary, hydraulic, 9200 in.lb. torque, variable speed booster motor for auger.

2. SPOILS BIN

The spoils bin is 30" wide with a 1.25 cubic yard capacity, gravity dump. Asphalt spoils may be loaded or discharged from both sides of the truck. Rear mounted spoils also available.

3. VIBRATORY COMPACTOR PLATE

A Wacker WP 1550AW Compactor equipped with a 5.5 hp gasoline Honda Engine with auto oil alarm shut down. Operating weight is 190 lbs., centrifugal force 3375 lbs., plate size 19.5 x 23", a water tank and locking holding down brackets.

4. VIBRATORY ROLLER

The vibratory roller is a Bomag BW55E with a 4 hp Honda Engine. Operating weight is 351 lbs., centrifugal force 2250 lbs., and single drum vibratory roller 22" wide, centrifugal clutch and water tank.

5. HYDRAULIC REAR LIFT PLATFORM

A hydraulically operated lift platform for loading or unloading compactor plate or roller. The platform has a safety latch in the up position, an in cab "platform down" indicator light with compactor or roller hold down brackets and an optional pavement breaker mount. All controls for platform are at the rear of the unit.

6. ELECTRIC HOIST

A 12 volt 1 1/3 hp electric hoist is available for loading or unloading the vibratory compactor plate.

7. HYDRAULIC OPERATED STEEL TOP DOORS

Two (2) hydraulically operated bi-fold steel top doors with hex brake for rigidity. Doors are insulated with 2" of high temperature insulation in a double steel jacket. The doors have rain seal caps and flex plates to keep asphalt out of door hinges. Each door shall have a 1 1/2" bore with 13" stroke hydraulic cylinder with bypass and flow control valves. The controls for doors are at the front of the unit behind truck cab passenger side.

8. INSULATED TARP TOP COVER

The tarp is a double form fitted 2" insulated tarp with tie downs. The tarp material is capable of sustaining 500° F.

9. WATER TANK

A frame mounted eight (8) gallon tank with rust proof liner, valve and hose. Water supply for asphalt compactor plate.

10. DRIP PAN

A ten (10) gallon drip pan for waste oil combination, for flushing pump, spray wand and lines at the end of the work day, with necessary valve for draining.

11. REMOVABLE LP GAS BOTTLE

100 lb. (25 gallon) removable propane bottle complete with 10 PSI regulator valve.

12. FRAME MOUNTED LP GAS BOTTLE

A frame mounted 35 gallon or 50 gallon capacity LP Gas Bottle with quick fill connector, 10 psi regulator and fuel sight gauge.

13. PAVEMENT BREAKERS

Optional Stanley BR45, 72, 67 and 87 Pavement Breakers, complete with quick couplers, asphalt cutter, tamper and detachable shank with lockable transporting bracket.

14. HYDRAULIC TOOL LINE HOSE REEL

Shall be 3000 PSI with dual 25' hydraulic tool lines. Reel is spring loaded auto-retractable.

15. AIR LINE HOSE REEL

An air line hose reel with 20' of hose. Reel is spring loaded auto-retractable.

16. HYDRAULIC AIR COMPRESSOR

To blow out repair sight and other compressed air demands, a separate self contained 25 CFM @ 125 PSI hydraulic driven air compressor with cooling fan. Hydraulic and electric controls are located at right rear of unit. Air compressor comes with quick couplers, 20 foot air hose, 5 foot air blow gun with deadman control valve, 5 gallon air tank with cable assisted condensation drain and 150 psi relief valve.

17. DIESEL FUEL / RELEASING AGENT HOSE REEL

Hose reel for diesel fuel spray wand has 20' of hose. Reel is spring loaded auto-retractable.

18. TACK OIL HOSE REEL

Hose reel for tack oil has 15' of hose. Reel is spring loaded auto-retractable.

19. DIRECTIONAL ARROW BOARDS

Optional Able 2 with arrow flashing left, right and warning bar OR Optional Wanco model WSBA-14, State D.O.T. approved, with arrow flashing left, right and warning bar. The arrow board is mounted on the rear of the unit with in cab controls.

20. STROBE LIGHT

A pedestal mounted Meteorlight model SY2000 series.

21. SAND SPREADER ASSEMBLY

The Sand Spreader Assembly includes chute, spinner, hydraulic motor, hydraulic hoses, hydraulic valve, quick coupler connecting fittings and has in-cab 12 vdc electronic controls. For safety purposes, NO hydraulic high pressure hoses are in the cab.

22. EXTRA TOOL BOX

A 12 gauge steel 19" x 24" x 30" with water proof locking door.

23. ASPHALT EDGER

Edger is designed to repair deteriorated shoulders on highway. Screw conveyor assembly is ball bearing mounted, conveyor is driven by a 100 in. lb. torque hydraulic motor. Edger is powered with a 20 hp Honda LP Gas or Gasoline engine with direct mounted hydraulic pump. Unit mounts to rear of patch unit with 4 bolts. Edger has separate asphalt chute with hydraulic splitter valve to allow separate control from hopper screw conveyor to side deliver screw conveyor. Screw conveyor is fully enclosed for safety. Asphalt Edger also available with optional 21 HP Lombardini Air Cooled Diesel Engine with electric start and low oil shut down.

24. PTO

A Muncie or Chelsea PTO Electric Over Air Shift or Hot Shift, depending on transmission model.

25. THROTTLE CONTROL

An electronic engine throttle control remote rear mounted.

26. FIRE EXTINGUISHERS

Optional 5 lb. ABC in cab mounted extinguisher OR 10 lb. ABC extinguisher mounted outside the truck cab.

27. HIGHWAY WARNING TRIANGLES

A Highway warning triangle kit consisting of three (3) reflective triangles in a storage case.

28. WORK DECK

Available only on units with a built-on road oil tank. The work deck, designed to provide easy and safe access to emulsion oil tank and asphalt hopper, is constructed of 1/4" angle iron and 3/16" expanded metal with assist hand rails and shall be mounted between hopper and truck cab.

29. ASPHALT LUTE AND SHOVEL HOLDER

Spring loaded asphalt lute and shovel holder, mounted curb side of unit.

TRUCK APPLICATION

(GMC-C7H042 / INTERNATIONAL-4300 or 4700 / FREIGHTLINER-M2 OR EQUIVALENT TRUCKS)



MINIMUM AXLES and SUSPENSION:

Front axle — 10,000 lb. capacity

Rear axle — 21,000 lb. capacity

Auxiliary springs for load stabilization only.

Front springs — 10,000 lb. capacity

Rear springs — 23,000 lb. capacity

FRAME:

18.0 S.M.

TIRES and WHEELS:

Wheels — Disc 10H steel 22.5 x 8.25 1 PC

Tires — Radial 11R22.5 - 14 ply. hwy.

TRANSMISSION:

Allison Automatic or Standard

ELECTRICAL EQUIPMENT:

Alternator — 120 amp

Battery — 12 volts, 2 each

COOLING:

Heavy duty radiator

G.V.W.: 33,000

(NOTICE) CAB TO AXLE:

Basic unit with spoils bins — 138" C.A.

Basic unit without spoils bins — 120" C.A.

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