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# Model 540 Serial Number 13720504

# Puckett Mfg. Inc.

Model 540

Operational,
Parts,
&
Service
Manual

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#### PRESTART CHECKLIST - DIESEL

- 1.) Check fuel gauge. Fill tank before paving and as necessary.
- 2.) Check engine oil level, replenish as necessary. See Engine Manual.
- 3.) Check washdown tank fluid. Replenish as necessary.
- 4.) Check oil cooler, air intake screen, or radiator for debris clean as necessary.
- 5.) Check air cleaner for cleanliness and make sure that components are tight to prevent intake of unfiltered air.
- 6.) Change filter elements per schedule in engine manual.
- 7.) Check hydraulic pump variable speed control lever for full travel.
- 8.) Check for and remove as necessary any asphalt buildup in exhaust ports located to the front and rear on each end of the screed.
- 9.) Make general inspection of machine for loose bolts and/or components.
- 10.) Check safety guards to insure they are in place and secure.

#### STARTING PROCEDURE - DIESEL

- 1.) Place all hydraulic control levers in "neutral" position.
- 2.) Place hydraulic pump variable speed control lever in "**neutral**" position.
- 3.) Pull throttle to **1/4** open.
- 4.) Turn ignition key to "heat" position and hold for 15 seconds and release.
- 5.) Turn ignition key to "start" position until engine starts. Release key, it will automatically return to "run" position.

**NOTE:** This engine may take up to 30 seconds to start in cold weather. If engine does not start in 20 to 30 seconds, stop cranking (release key) and reheat. Should the engine refuse to start on the third try, refer to the Engine Manual.

#### STOPPING PROCEDURE - DIESEL

- 1.) Place both drive controls in "neutral" position.
- 2.) Lower hopper to full "down" position.
- 3.) Lower screed to full "down" position.
- 4.) Place all hydraulic control levers in "neutral" position.
- 5.) Push throttle to **"idle"** position.
- 6.) Turn ignition key to "off" and remove key.

#### **OPERATION AT THE JOBSITE**

- 1.) With washdown hose and spray nozzle, spray washdown fluid on hopper, push rollers, screed extensions (front wall and underneath) and all other areas that will be in contact with asphalt material. This should be done at the beginning, during the paving day, and at the end of each day, so as to prevent unnecessary buildup of asphalt on the paver.
  - **NOTE:** Do not wash down paver with fluid just before loading on trailer, as paver tracks may become wet and slip on trailer ramps while attempting to load paver.
- 2.) Place throttle in "3/4 open" position. This will serve to preheat the screed in preparation to lay asphalt material.
- 3.) Using right and left track control levers maneuver paver in position for laying asphalt.
- 4.) With paver in position, move screed control lever to "down" position and hold until screed lift cylinder is fully extended. This will permit the screed to float free. Screed should be lowered onto a starting pad of asphalt or blocks of the desired paving thickness.
- 5.) Move right and left manually adjusted depth control screws up or down, as required to a neutral or free position. Slowly turn the screws toward the "up" position until a slight amount of tension is felt. The screed is now set to lay asphalt to the approximate thickness of the starting pad or blocks onto which the screed has been lowered.
- 6.) Move right and left flow gate control levers to the "closed" position and hold until both gates are fully closed.
- 7.) Have dump truck back up to the front of paver until the truck tires are 1-2 inches from push rollers. Move paver forward until paver push rollers contact rear tires of truck. **Do not raise screed**.
- 8.) Move hopper control lever to the **"up"** position and hold until the hopper almost touches the frame or dump body of the truck..
- 9.) Signal truck driver to slowly raise dump body allowing asphalt to flow from the truck into the hopper. **Be prepared to lower hopper** to prevent truck dump body from striking and damaging hopper as the truck body is raised. Fill hopper with asphalt.

- 10.) If area to be paved is level and pushing truck is desired, place the hydraulic pump variable speed control lever forward approximately 1/3. Select **Low** on the two-speed selector valve. Throttle should be set at approximately 3/4 open position. Signal driver to leave truck dump body raised a sufficient height to allow asphalt to flow slowly but continuously into the hopper.
- 11.) With the right and left extension control levers, adjust to the desired paving width if the desired width is more than basic screed width.
- 12.) Move the right and left extension control levers to the "open" position and hold until flow gates are **completely open**. Asphalt will then gravity feed down to and form a head of asphalt at the leading edge of the screed.
- 13.) Move the right and left track control levers to the "forward" position. Continue forward, laying asphalt and pushing the truck approximately 12 18 inches. If vibration is desired on the screed, move vibrator control lever to "on" position approximately the same time the track control levers are moved to the "forward" position.
- 14.) Move both track control levers to "neutral" position, stopping the paver. Always move vibrator control to "off" position when stopping forward motion of the paver. It may be necessary to signal the truck driver to stop, if the truck is moving. The truck should not be in gear nor should the driver "ride" the brakes.
  Recommendation advise the truck driver of the procedure in pushing the truck with the paver.
- 15.) Check thickness/depth of asphalt in the 12-18 inch mat and make necessary adjustment using the right and/or left manually adjusted depth control screws. Make adjustments, up or down, gradually to avoid **porpoising** effect of ripples in the mat as a result of adjusting too much in either direction. If the base on which the asphalt is being laid is on grade and level, only infrequent adjustments will be required after initial asphalt thickness/depth setting is made.
- 16.) Move right and left track control levers to "forward", continuing to pave until truck is empty and hopper is approximately 50% full. **RECOMMENDATION** leave small head of asphalt at leading edge of screed while waiting for next load of asphalt. If wait is longer than 10-15 minutes, pave 12-18 inches further and again leave a small head of asphalt. Repeat in 10-15 minutes intervals using asphalt remaining in hopper until next load arrives.
- 17.) If the paver is to used independently of the dump truck, follow steps 1-9 of this section.

- 18.) After the hopper is fully loaded, signal the truck driver to lower the dump body, stopping the flow of asphalt to the paver. Simultaneously, the paver operator should move the hopper control lever to the "up" position raising the hopper to avoid asphalt spills from the front of the hopper.
- 19.) Paver operator should then signal the truck driver to move forward to the next place to reload the paver. This next reloading place may be directly in front of the paver at a point where the paver operator expects the hopper to be emptied or another location on the jobsite.

#### **IMPORTANT NOTES**

- A.) When Loading and Unloading operator must use Low Gear and Low Pump Speed with the Engine RPM's at "1/2" Throttle. Use Low Gear when Parking the Machine.
- B.) To **shift** machine to **High Speed**, **Engine Throttle** must be at **1/2 open** and **Pump Speed Control Lever** must be set at **1/3**.
- C.) Right side auger, right side extension, hopper, right track and left track control levers are provided for two-man operation, to avoid making "blind" joints and for paving in two directions, reducing cycle time.
- D.) The hydraulic screed vibrator should be operated only when the paver is moving to avoid undue compaction in the mat when the paver is stopped.
- E.) Do not raise the hopper against the truck frame or the dump body of the truck. Using **Tailgate Chains** is recommended to prevent damage to **Backwall** and **Hopper Wings**.
- F.) When pushing a truck on level ground, the truck should not be in gear and the truck brakes should not be held. The paver will not push a truck with the brakes on.
- G.) The tow independently operated augers need only be used when the extensions are out and then only "off and on". The augers are used only for keeping the extended area fully charged with asphalt. Do not leave the augers operating continuously unless required.
- H.) If the hopper is loaded and the operator wishes to close the flow gates to transport material to an area inaccessible to the truck, reposition paver for next pass, etc., the following procedure should be employed. Always lower the hopper as low as possible without spilling asphalt. Close one flow gate and then the other flow gate. Lowering the hopper substantially decreases the weight being lifted by each flow gate.

- I.) The following procedure should be used if the asphalt truck drives away from the paver when loading or pushing the truck, resulting in a large asphalt spill in front of the paver.
  - 1. Stop paver.
  - 2. Lower the hopper as low as possible without spilling more asphalt.
  - 3. Close one flow gate and then the other flow gate.
  - 4. Windrow spilled asphalt material to the center and in front of the paver, making sure asphalt is removed from the path of the paver tracks.
  - 5. Move right and left track control lever to "forward", continuing to pave with asphalt previously gravity fed from the hopper. As the asphalt heads from the hopper begins to run thin, the windrow asphalt should be at the leading edge of the screed. If this is the case, continue to pave using the windrow asphalt, opening both flow gates as the windrow asphalt begins to run thin. If this is not the case, open both flow gates approximately 1/3, maintaining a full head of asphalt at leading edge of the screed until the leading edge of the screed strikes the windrow asphalt. Continue to pave.

    Failure to follow this procedure; in the event of asphalt spills will result in asphalt buildup and eventual damage to the flow gate cylinders and the tracks. Asphalt material inside the tracks, if allowed to build up, will eventually result in stretched and broken tracks.
- J.) Do not pull paver unless tow valves on drive pump is turned ¼ round and both track control levers are in the "forward" position (in gear). Do not pull paver backwards.
- K.) When paving uphill, lower hopper as needed, placing more weight directly over tracks to increase traction.

#### **SAFETY PRECATIONS**

**WARNING - LETHAL EXHAUST GAS!** - An engine discharges carbon monoxide when running, which may cause death if inhaled for even a short period of time-operate only where deadly exhaust gases can be safely dissipated.

**WARNING - DANGEROUS FUELS!** - Never add fuel to tank while engine is running. Stop engine and allow it to cool thoroughly to prevent fuel from igniting on contact with hot parts of ignition spark.

**WARNING - MOVING, HOT PARTS!** - Careless operation of power equipment creates hazards to life and limb. Never operate with safety guards removed. Keep hands, feet and clothing away from moving and hot parts. Remember that an engine gets hot while running, and exhaust system components get extremely hot. Always disconnect positive battery cable from battery to prevent unintentional starting while working on equipment. Never tamper with governor setting to gain more power – the governor establishes safe operating limits. Over speed not only shortens engine life but can be extremely hazardous. Keep people safely away from the operating area and be especially watchful for children. Stop the engine whenever you leave the equipment. Do not allow it to idle unattended.

**WARNING - EMERGENCY STOPS!** - Emergency stops are accomplished by moving both right and left track control levers to the "neutral" position. Know how to make emergency stops – do not allow inexperienced persons to operate your equipment.

**WARNING - PINCH POINT!** - Keep head and all body parts clear of area under raised hopper floor. Always place the **floor safety prop** under raised hopper floor before working or reaching into area under floor. **Also, keep all personnel clear of machine controls when someone is working or reaching under hopper floor.** 

# SAFETY PRECAUTIONS FOR PROPANE HEATED SCREED

#### **GENERAL SAFETY PROCEDURES**

- 1.) A propane screed heater is to be used only to pre-heat the screed before starting the paver engine. The propane heater must not be used when the engine is running.
- 2.) This equipment is designed to be used only with propane gas.
- 3.) Wrench tighten all fittings.
- 4.) Never use oil or grease for lubrication.
- 5.) Do not use oxygen with equipment.
- 6.) Keep cylinder upright at all times.
- 7.) Keep equipment free from dirt and oil.
- 8.) Use a regulator on supply cylinder.
- 9.) Check equipment carefully each time before lighting.
- 10.) Always light with a striker, never with matches.
- 11.) Do not operate in an enclosed area or near flammable material.
- 12.) Close all valves when not in use.
- 13.) Comply with all federal, state, and local regulations when operating this equipment

#### **PROPANE CHART:**

Flame temp. with air	2950 Degrees Fahrenheit.
Weight per cubic ft. of gas	8.59 lbs.
Cubic ft. of air needed to burn 1 cubic ft. of gas	24
BTU's per pound of gas	21,600

#### **Service Recommendations**

- 1.) **Hydraulic Filter Elements** Change every 2 years or 500 hours whichever occurs first.
- 2.) **Engine Oil Filter Elements** First Change at 50 hours every 200 hours after first change..
- 3.) **Fuel Filter** Change every 400 hours.
- 4.) **Air Filter** Check Weekly Clean as needed. Change as needed.
- 5.) **Hydraulic Fluid Level** Check monthly and after any loss of fluid. Dipstick is located in front of machine under the floor. Fluid level should be touching the bottom of the Dipstick to ½" up. Use Dextron III or equal. **Caution:** Do No Overfill
- 6.) Grease the following fitting on a daily basis.
  - a. Swivel Bolts on Depth Adjustment Assemblies 2 each.
  - b. Bearing on Bottom of Depth Adjustment Assemblies 2 each.
  - c. Side Gates 4 each.
  - d. Track Sideboard-Inside and Outside 8 each.
  - e. Hopper Cylinder Clevis Pins 2 each.
- 7.) Check all bolts, nuts, and fasteners tighten as needed.
- 8.) Check radiator fluid, engine oil, and engine fuel daily.

# **540 Operational Parts List**

Part #	Description	Qty per Model	UM	Notes
661400	Hydraulic Drive Pump 540	1	EA	
551350	Accessory Pump 540	1	EA	
550350	Engine Throttle Cable	1	EA	
550375	Hydraulic Pump Control Cable (fast/slow)	1	EA	
550225	5/16-24 Adjustable Clevis w/pins	2	EA	
375000	Washdown Pump 12-volt	1	EA	
015450	Washdown Sprayer and Hose Assembly	1	EA	
560300	Washdown Sprayer Only	1	EA	
547800	Drive Valve 2-stack	1	EA	
550550	Accessory Valves 9-stack	1	EA	
045800	Breather Cap Fuel & Washdown Tanks	2	EA	
051576	Pressure Tank Cap (Hydraulic Pressure Tank)	1	EA	
558600	Fuel Sight Gauge Assembly 540	1	EA	
252160	Fuel Gauge Dial Face Only	1	EA	
558400	Battery 70-675	1	EA	
061400	Hydraulic Oil Cooler	1	EA	
061405	Hydraulic Oil Cooler Mounting Kit	2	EA	
547000B	Decal Kit - Complete Blue Color	1	EA	
586410	No Start Safety Switch	1	EA	
409000	Switch - Washdown Pump	1	EA	

## 540 Screed Parts List

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Part #	Description	Qty Per Model	UM	Notes
542000	540 Bare Screed Assembly	1	EA	Includes *** items
662524	2-1/2 x 24 Hydraulic Cylinder for Extensions	2	EA	Seal Kit # 559700
349450	Paver Hydraulic Vibrator Motor MGG20030-BA1A3	1	EA	
542400	8' Screed Wear Plate 1/4 x 13 x 96	1	EA	***
543600	540 Right Hand Operator's Platform	1	EA	***
543500	540 Left Hand Operator's Platform	1	EA	***
414200	Screed Turnbuckle for Crown/Invert Adjustment	2	EA	
544000	Screed Extension Assembly Left Hand-540	1	EA	
565000	Screed Shoe Assembly Left Hand	1	EA	
664150	Extension Strikeoff Assembly Left Hand-540/560	1	EA	
544500	Screed Extension Assembly Right Hand-540	1	EA	
565500	Screed Shoe Assembly Right Hand	1	EA	
664160	Extension Strikeoff Assembly Right Hand-540/560	1	EA	
178000	Screed Extension Shoe Strap	2	EA	
015900	Screed Joint Shoe Nut 3/8"	4	EA	
546100	540 Screed Pull Arm Assembly Left Hand	1	EA	
546150	540 Screed Pull Arm Assembly Right Hand	1	EA	
018700	Propane Nozzle Mounting Cap Assembly	2	EA	

## 540 Screed Parts List

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Part #	Description	Qty Per Model	UM	Notes
563000	Depth Adjustment Assembly with Bearing	2	EA	
024200	4-Bolt Flange Bearing	2	EA	
013050	Depth Adjustment Screw Bracket Assembly	2	EA	
312230	Depth Adjustment Nut 1" Thread	2	EA	
289010	Depth Adjustment Swivel Bolt with Grease Fitting 1/2 x 1	2	EA	
142175	Depth Adjustment Swivel Spacer	4	EA	
033100	1/2-13 x 1 Hex Head Bolt Grade 5 Plated	2	EA	
545100	540 Exhaust Pipe Assembly Engine to Screed	1	EA	
055200	1-5/8" Muffler Clamp	2	EA	
199800	Screed Lift Cylinder	1	EA	Seal Kit #559600
359500	Cylinder Clevis Pin	2	EA	
550955	Cylinder Clevis Pin Clip	2	EA	
359580	Screed Lift Cylinder Pin Bushing	1	EA	
542050	Screed Lift Chain Assembly	1	EA	

# 540 Track Parts List

Part #	Description	Qty per Model	UM	Notes
556500	540/550 Track Pad & Chain Assy 38 Links	2	EA	
550940	500 Series Track Pad & Link Single Pad & Link	1	EA	
550925	500 Series Track Chain (Single Link)	1	EA	
652050	Track Pad Only (Single Pad)	1	EA	
24500	Insert Bearing for Trackroller 1-15/16"	8	EA	
556350	Trackroller Bearing Housing	4	EA	
556700	Trackroller Bearing Shaft 1-15/16"	4	EA	
552200	Rear Track Drive Sprocket Assy 500 Series Paver	2	EA	
550800	Gearbox Track Hub (Auburn)	2	EA	
407000	5/8 x 2-5/8 Stud Track	12	EA	
618329	Gearbox Wheel Stud (Auburn)	18	EA	
552300	Front Track Idler Sprocket Asy 500 Series Paver	2	EA	
552800	500 Front Idler Sprocket Axle 1-15/16"	2	EA	
550510	Track Tension Adj Cyl Assembly 3" x 2"	2	EA	Seal Kit #559600
421025	Breather Vent 1/4" Pipe Thread	2	EA	
556460	Track Adj Cyl Support Axle	2	EA	
556750	Track Top Slide Support Spacer	4	EA	
540100	Hydraulic Track Drive Motor 540	2	EA	Seal Kit #550170
551150	Track Motor Relief Valve	1	EA	

# 540 Hopper Parts

Part #	Description	Qty per Model	UM	Notes
540850	Hopper Spill Prevention Belt 540	1	EA	
540855	540 Inside Wing Mat Belt Left or Right	2	EA	
584110	540 Hopper Belt Mounting Strap	1	EA	
555140	500 Push Roller Assembly	2	EA	
024000	1" Pillow Block Bearing Push Roller	4	EA	
017185	Paving Alignment Assembly (rod, guide tube, & chain)	1	EA	
550700	Hopper Lift Cylinder 3" x 10"	2	EA	Seal Kit #559500
359535	Clevis Pin for Hopper Lift Cylinder With clip	4	EA	

## 540 Rear and Side Gate Parts List

Part #	Description	Qty per Model	UM	Notes
	Rear Gate Parts			
542300	540 Left Hand Auger 32-1/2"	1	EA	
542350	540 Right Hand Auger 32-1/2"	1	EA	
550190	Auger Motor Hydraulic	2	EA	
311600	Auger Hub for Hydraulic Motor	2	EA	
542375	Auger Bearing (2-bolt)	2	EA	
311800	Auger Hub for Bearing	2	EA	
550575	Rear Gate Cylinder with Extended Rod	2	EA	Seal Kit #559700
359500	Hydraulic Cylinder Pin with clip	2	EA	
550955	Hopper Clevis Pin Clip (clip only)	2	EA	
541401	L.H. 540 Gate Assembly (Weldment Only)	1	EA	
541406	R.H. 540 Gate Assembly (Weldment Only)	1	EA	
	Side Gate Parts			
546225	540 L.H. Side Gate Assembly (Weldment Only)	1	EA	
546250	540 R.H. Side Gate Assembly (Weldment Only)	1	EA	
199400	Side Gate Cylinder with Clevis on each End	2	EA	Seal Kit #559800
359500	Hydraulic Cylinder Pin with clip	2	EA	
550955	Hopper Clevis Pin Clip (clip only)	2	EA	

# 540 Kubota Engine Parts List

Part #	Description	Qty per Model	UM	Notes
547525	Fuel Filter Assembly Kubota 1105 engine	1	EA	
557500	Fuel Filter Element Kubota 1105 Engine	1	EA	
557600	Oil Filter Element Kubota 1105 Engine	1	EA	
558000	Air Cleaner Assembly Donaldson 1105 Engine	1	EA	
557750	Air Filter Element Donaldson 1105 Engine	1	EA	
550875	Engine Alternator Kubota (40 amp)	1	EA	
550860	Alternator Belt Kubota Engine	1	EA	
561390	Starter Kubota 1105 Engine	1	EA	
561385	Fuel Shutdown Solenoid Kubota Engine	1	EA	
561380	Engine Wiring Harness Kubota 1105 Engine	1	EA	
551345	Radiator Assembly Kubota 1105 engine	1	EA	
552100	Radiator Isolator Mount Kit Kubota Engine	1	EA	
552075	Engine Mount Isolator RAB-0	4	EA	
587200	Kubota Engine Switch with Keys	1	EA	
587250	Kubota Engine Switch Key 2 per pack	1	EA	