

# TWISTED TEA'S 1981 SHOVELHEAD

# TEA DRA

**F**lat Broke Chops & Rods is less of a business perse' and much more of a motley crew of rough and tumble Pittsburgher's with a penchant for making difficult things much harder than they need to be. While that might come off as a backhanded compliment or an overt slight, it isn't. Pittsburg is historically, a tough place inhabited by the descendants of our founding fathers and [at one time] one of the wealthiest places on earth. The steel industry that forged our country over the last 160 years was based in Pittsburgh. The

oil industry started in Pennsylvania in 1859 when oil was struck for the first time about a hundred miles away from Pittsburgh in Oil Creek, Pennsylvania. The name Flat Broke Chops & Rods is aptly placed, and the builders there are committed to building motorcycles and hot rods that live up to the rough and tumble climate Pittsburgh is known for.

For starters, the 1981 Shovelhead engine bolted into this chassis was built by master craftsman Rich Pitoniak. To many, the Shovelhead was Harley Davidson's version of a "Muscle Car" engine. It seems as if the engineers of

the day really stressed the importance of things like intake manifold velocity, dynamic cylinder head timing, and volumetric efficiency. The newer, more venerable Shovelhead (named for the style of rocker boxes and their resemblance to a shovel) is much more "torquey" than its predecessor, the "Panhead" was, and therefore it is much easier to make power with. Introduced in 1966, the newer Shovelhead featured an infinitely better induction system and really moved Harley engines away from being simple air in/exhaust out engines. Also, due to





Article By: Jason Hallman Photos By: Chris Callen

# VEEGER





the reduction of reciprocating weight of fewer valve train components, it is infinitely better mechanically, even with its slightly more radical valve pushrod angle when compared to the Panhead engine.\*

With this particular Shovelhead engine build, the engine builder focused more on the simple and useful characteristics inherent in the engine design to achieve the builders' goal. To achieve this, more focus was placed on the exhaust choice from an aesthetic standpoint and getting the design to fit the

overall project flow instead of using a short pipe system that would deliver a more "racey" sound and [possibly] more horsepower. Pitoniak also chose a nice, easy-going, mid-level cam that is street [and kick only] friendly and lends itself to longevity in place of higher torque and horsepower numbers on a dyno. Again, if you've ever owned or ridden a radical Shovelhead, you know of what I speak. They have a tendency to rattle things loose (like the fillings in your teeth).

The Flat Broke guys found

inspiration for this project by melding the lines of a vintage Panhead with those of a straight axle Gasser. This look was achieved using a 1949 Panhead oil bag and split tanks from a 1952-ish fuel tank set up. Flat Broke tried everything from a rubber band Superglide fuel tank to twin cam touring tanks, Shovelhead tanks, and nothing fit until a pair of Panhead tanks were test fitted to the frame. The stock Harley chassis was then outfitted with a drop seat frame





kit from Jeff Cochran at SpeedKing Racing. With the drop seat and the Panhead oil bag in place, this meant that they had to sacrifice the starter. To add to the "gadgetry" of the Gasser look, a belt drive was just mechanical enough to achieve the look they were going for.

Klock Werks fenders are perfect in any application, fit exactly as they should, and provide ample room for the gasser-style lettering and flat yellow paint. Normally, all paint chores are handled inside Flat Broke Chops & Rods. Flat paint provides the overall finish and the foundation that makes the lettering guy, [Casey Kennel] at The Paint Chop feel right at home for this type of project. Flat Broke left Casey alone to employ his skillset and pay homage to Twisted Tea (the client) and the Gassers for which this build was inspired by.

The spring solo seat was recovered by Curt Green. Flat Broke really wanted to pull the motorcycle into a period correct feel, so springs were utilized to get the overall look back into play. The drop seat frame setup offered the perfect body and frame





## TEA DRAGGER TECH SHEET

OWNER: Boston Beer Co  
CITY/STATE: Boston, MA  
BUILDER: Chris Callen  
YEAR: 1981  
MODEL: Shovelhead  
VALUE: A Whole Lotta Tea  
TIME: 3 Month

ENGINE  
YEAR: 1981  
MODEL: FX  
BUILDER: Pitoniak Custom Cycles  
IGNITION: S&S  
DISPLACEMENT: 80cu  
PISTONS: S&S  
HEADS: Stock  
CARB: S&S Super E  
CAM: S&S  
AIR CLEANER: S&S  
EXHAUST: Paughco  
PRIMARY: Tech Cycle

TRANSMISSION  
YEAR: 1981  
MAKE: Harley-Davidson  
SHIFTING: Foot

FRAME  
YEAR: 1981  
MODEL: FX/SpeedKing Drop Seat Kit  
RAKE: Stock  
STRETCH: Stock

FORMS  
BUILDER: Harley-Davidson  
TYPE: Evo Heritage  
TRIPLE TREES: Stock  
EXTENSION: Stock

WHEELS  
FRONT WHEEL: 50 Spoke Fat Daddy  
SIZE: Fat 21"  
TIRE: Metzeler  
FRONT BRAKE: Stock  
REAR WHEEL: 50 Spoke Fat Daddy  
SIZE: 18"  
TIRE: Metzeler  
REAR BRAKE:

PAINT  
PAINTER: SpeedFreak  
COLOR: Matte Twisted Tea Yellow  
TYPE: HOK  
GRAPHICS: The Paint Chop  
CHROMING:

ACCESSORIES  
BARS:  
RISERS: Stock  
HAND CONTROLS: Biker's Choice  
FOOT CONTROLS: Heritage  
GAS TANK(S): 1953 Panhead  
OIL TANK: 1949 Panhead  
FRONT FENDER: Klock Werks  
REAR FENDER: Klock Werks  
SEAT: Drag Specialties/Bare Bones Leather  
HEADLIGHT: Drag Specialties  
TAILLIGHT: Tombstone  
SPEEDO: Ted's V-Twin

PHOTOGRAPHER: Chris Callen

line desired. Bars and controls were left simple yet effective. The front end of the bike needed a proper era-correct feel, so the front end was sourced from an EVO Heritage Softail. The nacelle is just antiquated enough to get that job done without drawing too much attention to the fact that it isn't period correct, and the saddlebags are era-specific and again have enough real estate to tie it all together for the client without being obnoxious.

Spokes are a go-to for the Flat Broke crew, and why shouldn't they be? A billet wheel would never have existed back in the day this bike harkens to. Flat Broke Chops & Rods are a pair of indiscriminate builders focused on high-quality project-

based made to order builds like this one built for Twisted Tea. While they are most known for their custom choppers, the opportunity to work consistently with a client like Boston Beer Company keeps them in a space of constant innovation and moving forward. So, let's remember to "Keep it Twisted."

\* Sidebar: Dynamic cylinder head timing is something that is more nuanced than it sounds. The newer cylinder head design found on the Shovelhead engine brought to light new innovation and started the conversation in between "velocity" versus port "volume" in relation to efficiency. In the "bigger is better" world of engine building, some people misplace or conflate velocity with volume.

CYCLE SOURCE

