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Bold Treatment for
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see page 16

no slouch on the street, the '61 Matchless is really...

HOT IN THE



Charging down sandy trails or leaping from one of the many unexpected gullies strewn across the floor of the Mojave wasteland, the 500cc Westerner rides like it's on rails. Lack of distressing front wheel flop and tail wagging allow highway speeds on trails.

DESERT

By Lynn Wineiland

THE SEVEREST TORTURE CHAMBERS to which a man may subject his motorcycle are found in the weekly Hare and Hound races across the varied, always rugged terrain of southern California's Mojave desert. Rocky beds of tire-slashing lava fragments, miles of bottomless sand washes filled with jagged, brush-concealed stones, ditches, bumpy road crossings and steep, shale hills combine to wreak destruction on the unwary rider who ventures near. Difficult to traverse

Brickly Joshua trees and hard-pocked sand provide a scenic backdrop for the Westerner and rider. Bike is shown here stripped of lighting equipment, muffler, battery and all equipment not necessary for roughing it. A few personal modifications were also made.



continued

under any conditions, the landscape becomes all the more tortuous as racing speeds are attained. It was to this pit that we willingly and happily condemned the 1961 Matchless *Westerner*.

The Associated Motorcycle Company of London, England, with over sixty years of experience in the manufacture of Matchless cycles believes in sending a man to do a man's job. The robust 500 cc *Westerner* is well equipped to contend with the rigors of the battering desert events to say nothing of providing thousands of reliable miles of comparatively easy road riding. The ability of the Matchless to not only withstand but truly absorb the shocks of cross country racing is indicative of the longevity and cushioning qualities to be experienced in street use.

"Phenomenal" was the word we used after taking a friend's *Westerner* for a quick tour through the desert sage following a recent Hare and Hound and it was then that we selected the new Matchless as the subject for our current test. Dropping by the offices of The Indian Company Western Division in Burbank, California, local distributors of the Matchless line, we were allowed to select a new machine, still in the crate, for our use. "Setting up" the bike gave us an opportunity to carefully examine the quality workmanship as assembly took place. Although supplied with knobby tires for rough-housing off the road, the *Westerner* is completely equipped with street riding items such as muffler, battery, horn, head and taillights, and speedometer. Firm believers in the slow break-in, we tenderly nursed the new machine through 500 miles of commuting about Los Angeles streets and freeways before brotting out to our first session in the sod and sand. Make no mistake, the Matchless is ready to roar right out of the box, though fitted out in a compromise between strictly-for-street and all-out competition trim. The thirty-and-a-half inch single shown here and on the preceding pages was stripped of all items superfluous for chasing the rabbit and has been slightly modified in a manner

found to be more to this rider's personal liking and riding abilities.

Overall appearance and layout of the *Westerner* is well above par. This is a vehicle on which the average or larger rider feels at ease. The bars are situated nicely at the back of the steering head, sweeping up and back to provide comfortable hand positioning on the grips. The rider sits more nearly above the rear wheel than on many machines, an asset in improving tractive qualities. Foot pegs, sturdy, short, and blunted for safety are logically placed to allow the frequent leg exercises necessary when riding the rough stuff to be performed without undue muscular strain. The twinseat is wide and adequately padded so that no framework is felt on the insides of the thighs when bouncing offside, though some riders prefer a shorter, thicker and softer saddle for pure competition use. Layout of the controls is in standard pattern for the English machines with rear brake foot lever on the left and shift at the right. An indicator fixed to the shifting lever indicates gear selection. Right hand throttle action is fast, in competition tradition. Clutch, front brake, compression release, spark and choke controls are on the bar in standard placement. The headlight, fitted with ammeter and dimmer switch is bracketed from the front fork top covers and may be quickly removed for dirt riding by unscrewing two bolts and pulling the multi-pronged master plug. Switching on the lights is controlled from a panel just below the seat at the rider's left, forward of the 3 quart oil tank. Black enamel paint is used in copious quantities on the frame and accessories, offset by buffed aluminum and chrome. Standard tank color for the *Westerner* is red, striped in wide and narrow bands of silver.

The Smiths speedometer is mounted to the steering crown by a single bolt adequate for street usage, but too little support for the heavy instrument in cross-country riding, resulting in bracket fatigue and breakage on two occasions. A shock-mounted unit appears to be the practical solution to this problem as well as preserving the instrument itself from accuracy-destroying vibration, a big factor in enduros.

ROD & CUSTOM

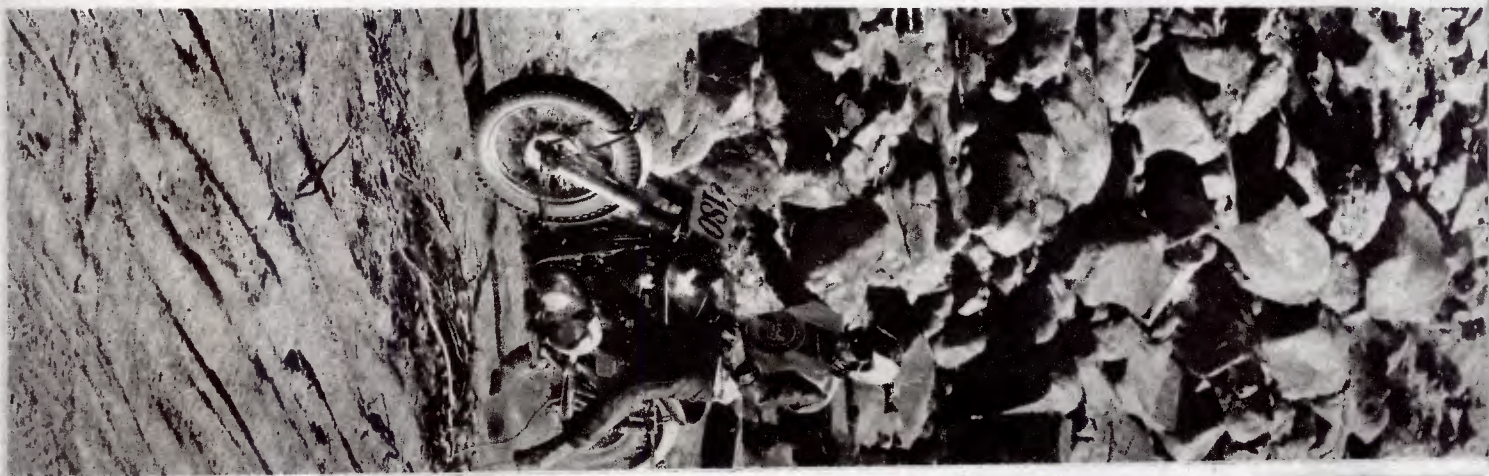


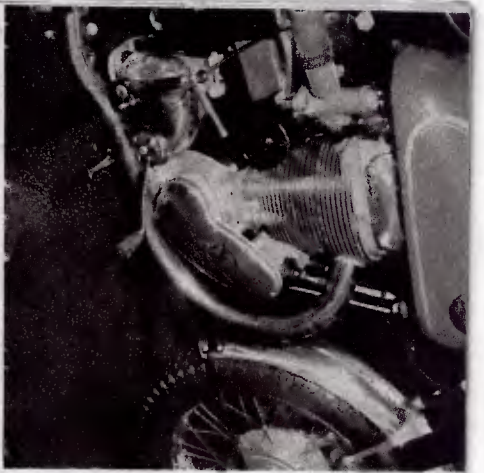
In the pits prior to start of Big Bear H&H, adhesive-backed tank card is applied so the crews at checkpoints can mark bike to indicate passage through check. Matchless was running in top form and eager for the fray. Carburetor was tuned for 3,000 ft. altitude.

Deep, sandy trail is welcome after dropping down rocky mountainside. Big Bear run was a machinery buster in some sections though Matchless/Indian withstood battering without harm. Feather on helmet indicates that to be an Indian rider you must look like one.

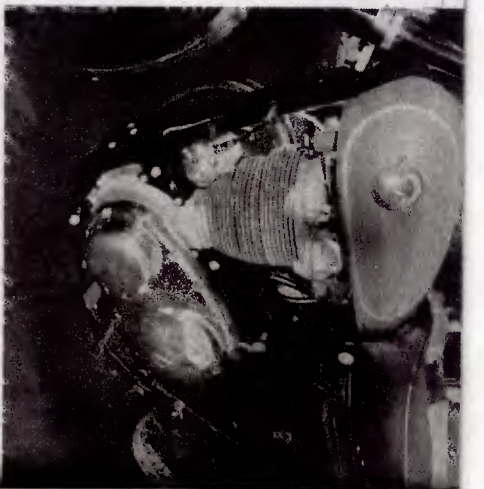
The front forks are as exciting in action as they are beautiful in appearance. The buffed alloy sliders are capped with chromed spring covers which slip inside the enameled top covers. For dirt use many riders replace the metal items with accordion-style rubber boots to prevent dust from harming the action of the 2-way, oil damped *Teledraulic* units. A sensational ride is to be experienced as rock and brush seem to miraculously disappear beneath the telescoping front supports. So vivid was our impression that we returned to our own machine with a sign reading, "For Sale — One Brick — Cheap."

The 3.50 x 19 Dunlop Trials Universal tire at the front is well supported by the sturdy, chromed hoop and staunch, butt-jointed spokes leading to the cast alloy hub. The hub is quite deep, yet light and well supported by interior webs, providing wider support for the tapered wheel bearings, and increased

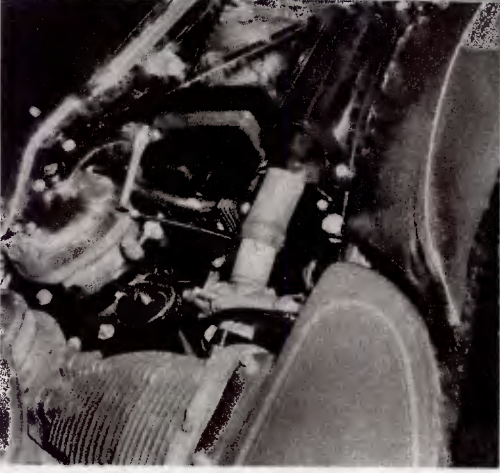




Timing side of 500cc engine reveals clean design with integral push rod tubes visible through fins on cylinder barrel. Matchless flying "M" appears on cam cover over chain leading to Lucas magneto. Toolbox behind cylinder has wingnut to secure hinged cover.



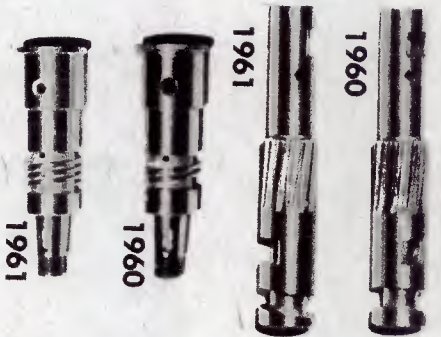
Drive side is dominated by buffed aluminum primary chain cover, albeit somewhat exposed to rocks because of frugal skid plate between loops of double tube frame. Gas tank mount pedestals are rubber snubbed. Plastic medallions on tank are easily broken in dirt.



Control layout is neat with handles and levers grouped in conventional manner on nicely swept, not-too-long handlebars. Gas cap takes some seating-in before leakage stops. First few tanks were kept purposely low to prevent any spilling. Gas tank is attractively striped. Amal Monobloc carburetor is well filtered by air cleaner in baffled canister housing. Battery is just below filter, has main wiring system below seat with horn, light switch and regulator. Four-speed transmission is small in size but rugged and very dependable. Tool kit supplied with scooter is complete with grease gun, tire irons, spanner for rear shock adjustment, clutch tool, point wrench and gauge, circlip pliers, standard pliers, adjustable low wrench, hexagon and spark plug wrenches and Whitworth open ends.



ROD & CUSTOM



Comparison of 1960 (upper) and '61 (lower) oil pump parts clearly shows change made by Matchless to assure positive pressure and adequate supply of oil to crank and valves under all conditions. Spiral was extended equivalent to half again as much travel.

HOT IN THE DESERT continued

spoke angle over that of the more common hubs gives greater resistance to side loads. The front brake is excellent in design, action and appearance. The actuating lever is tucked behind the left fork tube where it is protected from accidental application by hitting obstacles in the trail.

Of extremely rugged constitution, the twin tube frame swings down from the steering head to form a duplex cradle for the engine. The top bar, hidden by the rubber mounted, three gallon fuel tank, is bracketed to the uppermost part of the engine, thereby dampening vibration and at the same time rendering the engine a basic part of the frame structure. The frame aft members are securely bolted to the front section providing easy replacement of any pieces which might become damaged as well as permitting the frame assembly to flex slightly in action and ease stresses.

Coming on like Jack the Bear at a twist of the right wrist, the horsepower developed from the low end right on up the scale by the thirty-and-a-half cubic inch single is enough to make even the most blasé rider grin from ear to ear. Nearly "square" in bore-to-stroke ratio



Alloy sliders with chrome extensions in top spring covers create beauty in functional front forks. Axle is secured by caps similar to familiar auto connecting rod. Alloy fenders are trim, good looking and help keep down weight as well as splashing in wet weather.

the 3.39" diameter 3-ring aluminum piston travels 3.36 inches in the iron-lined alloy barrel. Valve seats are cast into the light alloy, die-cast cylinder head, seating the generous size, chrome plated, Stellite-tipped valves at 78° to the bore in the hemispherical combustion chamber. Cam action is from individual, gear driven camwheels actuating Hyduminium pushrods with screwed-in steel tips riding in hardened steel mushroom tappets. Valve springing is by duplex hairpin springs. Down in the lower end, the forged con rod rides on 14 roller bearings set in a Duralumin cage on a two-piece crank-pin made up with a hardened steel sleeve over the 85-ton alloy steel center pin. Individually balanced flywheels bracket the crankpin with the outer journal on the drive side supported by a double row of ball bearings and the timing side journal riding in roller bearings and a bronze bush. The oil pump, feeding pressure to all moving parts is of the double plunger, rotary reciprocating type, beefed up for '61 by extension of the spiral gear.

Of exceptional interest is the exterior of the engine which is the cleanest design to be found on any bike. Beautiful

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continued

fully fanned and massive in appearance due to enclosure of all lines and push-rod tubes within the barrel casing, the 500 single appeals because of ease in cleaning. Fewer places for leakage and lack of outside paraphernalia lead to a dry-running engine where dirt won't cake and cut down on cooling efficiency. The primary chain case is of cast aluminum, easy to remove for maintenance, and is provided with large inspection holes for chain and clutch adjustment. The clutch action is smooth, due in part to the rubber vane shock absorber used on the multi-plate unit.

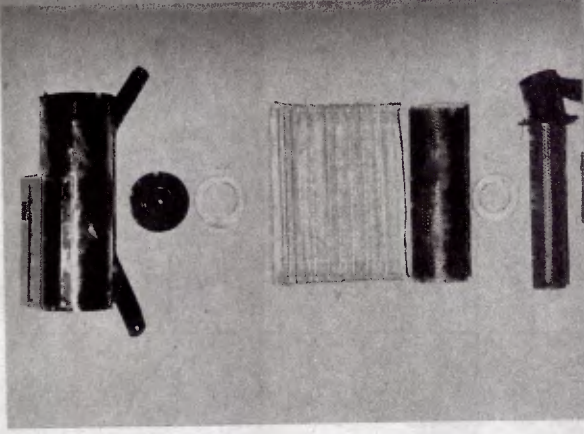
Gear ratios provided by the four-speed, synchromesh gearbox with stock rear wheel sprocket are near ideal for general street and cow-trailing use. Low is 14.85, 2nd is 9.85, 3rd is 7.08 and the top ratio is 5.80:1. Shifting is smooth, though some difficulty in finding the neutral position between 1st and 2nd while at rest occurred after the box had worn in a bit.

Five for the "thumper" is provided by a water proofed Lucas magneto with a breather pipe to allow deep water crossings without drowning out. The ignitor sits forward of the barrel and is chain driven from a sprocket mounted on an extension of the exhaust cam. Fuel is metered through an Amal Monobloc 389/12 carburetor with a venturi diameter of 1 $\frac{3}{16}$ ". Good economy and idling characteristics are to be experienced with the Monobloc, yet throttle response leaves nothing to be desired once proper jet sizes and needle setting have been attained. Tuning is critical on any small displacement engine and the Matchless thirty-incher is no exception when top performance is desired. For the dry atmosphere of the desert, at a median altitude of some 3,000 feet we found it necessary to decrease the main jet size some one hundred thousandths and lower the needle to the top notch, thus leaning the mixture all through the range. Some hesitation still occurred when rapidly cracking the throttle before full power was felt so the slide was filed

$\frac{1}{16}$ ", the equivalent of going from a #3 to a #5 slide. This corrected the deficit in response and we were thrilled at the staccato rap of the exhaust as the wick was turned up. The action was conveyed to the seat of the pants as well, for with the alertness of a burglar alarm the mount does its best to spring from between your legs and go sight-seeing.

One item worthy of its salt which Matchless has seen fit to install is the more than adequate air filter. Logically located directly behind the angle-mounted carburetor, the cylindrical housing has an integral baffle to protect the cleaner from a direct blast of water, sand or dirt. The cleaner element itself slips inside the frame-mounted canister and connects to the carburetor bell with a tubing-reinforced rubber hose. The element is a square of flannel cloth between wire mesh, accordion pleated and rolled to slip between two tubes of perforated steel. Felt rings and steel caps protect the ends, with the end opposite that which ducts to the carburetor supported at the rear of the housing. Lightweight oil such as inexpensive cooking oil is used to saturate the filter cloth prior to use. After effectively screening the powdery alkaline dust encountered in several hundred miles of rabbit chasing we spent a moment to remove the cleaner, inspect it and service it. The inside of the cleaner was free of silt, though the exterior was well coated with oily grime. Gasoline quickly washed away the dirt, more oil was applied and the filter replaced with about fifteen minutes expended in the job. We are familiar with some filters which take hours to remove, clean, oil and replace.

Worthy of mention in the same breath are the two stands provided on the machine. Both of these fold well out of the way. The center stand is located behind the somewhat skimpy skid plate, held in the up position by a strong return spring and steel clip. The side stand or prop stand is also spring-loaded to the up position, but fails to arouse enthusiasm with many riders who prefer an over-center lock to prevent the stand from swinging up before bidden.



Excellent air filter is more complex than outside indicates. Perforated tubes slip inside and out of screen-reinforced, cloth filter element folded in accordion pleats. Holes are seen at bottom side of housing.

The rear swinging arms which locate the rear wheel are hefty tubing with forged axle fitting brazed to the ends. The pivot point, located directly behind the transmission at the frame center down-tube, is well braced to prevent twisting and has large diameter, self-lubricating bushings with the cross tube acting as an oil reservoir. Rear suspension is by oil-damped spring units, easily adjustable to one of three positions to suit the weight of the rider. The spring/shock units are covered with chromed and chromed covers to keep out the dirt as well as increase the cosmetic effect of the bike. For pure competition many owners remove the top, painted cover and replace it with the lower, chromed one in inverted position. This modification prevents any possible tendency to bind if dented.

The rear hub and brake unit are similar to the front, being of cast alloy with internal webbing. The brake and 42-tooth, 50 pitch chain sprocket are bolted to the hub with six bolts and stop nuts. A shield covers the hub on the right side and a rubber plug allows

access to the grease fitting. Spokes from the hub to the 19-inch rear wheel are butted-jointed for strength without bends and are washed to prevent pulling through the hub. Spoke diameter is exceptionally generous, due no doubt to the factory's speculation as to how much punishment might be inflicted when their torquing single attempted to put its power on the ground by way of the 4.00 x 19 knobby Dunlop Sports. Attached to the rear hub inner axle, the speedometer drive unit is virtually free of trouble and requires but little lubrication. Placement of the speedometer cable is another story; the factory runs them straight up, then forward to the instrument. A severe bump at the rear causes the wheel to bounce, bending the cable—generally by the tire knobs and there it is grasped by the tire knobs and snatched violently. Forewarned, we quickly re-routed the cable forward along the swing arm and there it has remained, troublefree.

Extending back from the aft frame section, a hoop brace, strong enough to be used as a lifting handle when needed, supports the wide, alloy rear fender and provides a mount for the taillight

continued on p. 65

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HOT IN THE DESERT

Continued from p. 61

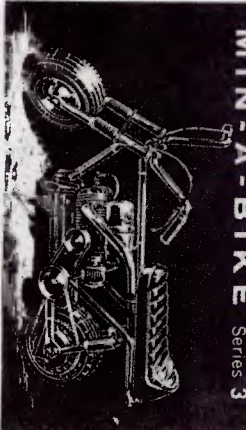
and license bracket. A seemingly small thing, perhaps, but to this rider who has experienced having to lift 'em out of a hole dug by too much throttle and not enough momentum, the handle factor of this brace is a strong point indeed.

Exhaust noise is always a factor on the singles — called "poppers" for obvious reasons. When muffled for street use they often suffer a serious loss of power. If the compromise is to power, trade neighbors lose respect for the sport. The Matchless seems to have found the answer in a muffler of pleasing proportions, yet one which silences well enough to pass the most critical without devastating power loss. In addition, the muffler may be removed for racing leaving a proper length of pipe for tuned output, exhausting well to the rear of the rider.

The physical analysis of the '61 Matchless indicates an exciting potential. As with the pudding, the real proof lies in following through with its intended use. We subjected the *Westerner* to over 1,000 miles of grinding desert use in addition to the original break-in. It performed faultlessly throughout, requiring only routine maintenance in addition to the relatively minor repair of the speedometer bracket. The rides were engagingly, deceptively easy and this novice rider found himself riding competitively with a whole new group, well in advance of former performances. Downhills are negotiated with ease by a squeeze of the compression release which converts the engine to a huge air pump and allows the rider to float down in the gear of his selection. Uphill trails fall beneath the tires and slogging sand-washes become freeways as speeds of over 50 mph are attained. Choppy sand and fast cross country are equally the merit of the Matchless, its superb combination of long, 55 1/4-inch wheelbase and great leading angle of the front forks teaming up to flatten any terrain. Did we like the bike? How impressed can you get? Let it suffice to say that we bought one. This machine is, in words of the manufacturer: *Matchless*.

MAY, 1961

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