

Smoke Signals

The 'meant to be quarterly' newsletter of Iron Indian Riders Australia

Autumn 2023 Edition



Disclaimer: The editor does not necessarily agree with or endorse any of the opinions expressed in, nor the accuracy of content, in published articles or endorse products or services no matter how or where mentioned; likewise, hints, tips, modifications etc. must be confirmed with a competent party before implementation.

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Monthly Meetings

Victoria To Be Advised (more info in this edition)

The Front Cover

"Burt" Munro, an Indian legend, pictured with his new wife Florence Beryl Martyn, who he married in 1925 in New Zealand. Florence died in 2007 and was the first cousin, once removed of your "Smoke Signals" editor. Motorcycle gloves at the wedding?

Each edition of Smoke Signals will hopefully feature a photo of, or relating to, an Indian motorcycle or a detailed image of part thereof. If you have a photo you would like to see on a future front cover, please email it to the editor of Smoke Signals along with a sentence or two telling its story.

A Message from your Outgoing President

To all Members

It is with deep regret that I inform you of my resignation from the position of President of our Melbourne chapter of Iron Indian Riders Association of Australia.

Due to certain difficulties, I have faced over the last few months, I had to make the hard decision to sell my Indian which in turn, makes me ineligible to continue as your President, it has been my honour and privilege, to have worked with the fellow committee members (Executive and Non Executive), and to have known all my fellow members socially, Ride safe and keep those Indians rumbling through this great country of ours

Yours sincerely and with deepest regards

Donald McDonald



A Message From Your New President

Hi Guys and Girls,

As your departing VP and new President I wanted to extend an invitation to everyone to give me a ring 0466 229 747 to discuss our future direction as a club. We welcome constructive criticism and all ideas to improve our club. Of course we appreciate not everyone has a lot of time to give and for some this is a vehicle just to get a red plate. Sadly if we don't move forward this may not be an option for the future. So we all need to put a bit in to make this work for everyone. Ride suggestions and places to visit are always welcome.

One of the things I am acutely aware of is a commitment to make sure this club is all inclusive with a grievance mechanism. There is one thing I wanted to specifically make some changes on, that's is a specific inclusion of all paid up members. I want to make sure no one is excluded for any reason at any time and it will be a commitment of mine to ensure something is entered into the constitution to prevent exclusion for any paid up member for any reason whatsoever.

The season has been all over the place weather wise but I've still got plenty of rides in and I finally got my 48 Chief back on the road, which gave me a warm glow again. Gippsland really is god's country for riding so I'm very happy I moved here away from plod, traffic lights and lots of cars. Now all I have to do is miss the milk tankers and logging trucks. Bear with us whilst we reorganise a few things, this make take a short while.

Look forward to hearing from you

Ride Safe, Mark

A Change of Direction Is Needed

Over one hundred years ago when motorcycles were in their infancy motorcycle clubs were formed, in those days like the Freemasons and every other hobby from stamp collecting to pigeon fanciers all had a social and family event monthly to attend. Some clubs had clubhouses and even holiday houses for their members to go to Torquay, Apollo Bay, Dromana or the Dandenong ranges, these often had swimming pools and lots of other equipment to make members feel they were in a "family".

So all was good and members used to mow the lawns and maintain the clubhouses etc and time wasn't limited as it is nowadays, the Great War hit the male population hard and post war these clubs became places for returning servicemen to share their experiences with each other motorcycle clubs boomed even during the depression these clubs were gaining membership and then WW11, things changed again people had more time and money Australia was on a boom and motorcycles were relatively affordable as were cars.

Some of the prewar clubs folded like the Indian Club of Victoria others like the Harley Club turned into a competition club and others either adapted or ceased. In the seventies clubs altered again and the Vintage Club of Victoria with over 400 members, split forming the Classic Club of VICTORIA and the Pioneer Club as members needs demanded less rigid rules. Most clubs lost their clubhouses as the cost of rates and real estate exploded, they were forced to either rent halls or even hold meetings in pubs.

The nineties were really causing pressure on social activities with family commitments being very important with parents working and weekends a critical time use use that precious time to spend with kids or elderly parents, motorcycles and clubs had become leisure vehicles and collectables, in fact people bought vehicles as status symbols!

In 2011 the Iron Indian Motorcycle Club of Australia was formed as the IMCA changed their constitution so they no longer recognised any Indian made after 1953, so logically our constitution read "Indians of any era" we also had the advantage of associate members so you could have other brands of machinery participating if your Indian wasn't going or you perhaps were looking to buy one, other one make clubs abhor such things. The IIRA had nearly 100 members in the first 3 years and 14 left to reform the Indian Club of WA so these things happen and we were sailing along till Covid-19.

When this first hit before lockdowns all was fairly normal, then the lockdowns that caused people to reevaluate their whole lives and social activities as well memberships dropped and obviously so did activities in that time, Christmas Parties, Gypsy Tours, rallies, monthly runs and meetings all canned, memberships dropped and we weren't the only ones affected. The Classic Club that used to pull 100 members to a meeting now get 30, rallies that attracted 80 members struggle to get 40 and membership has taken a substantial fall as well, car clubs with 400 members are getting less than 6 turn up on a run!

So when our meetings are well down on members turnout and we can't get anyone to sit for committee positions, with a low turnout on Club runs it's time to rethink a whole method that has worked over 120 years and now isn't!

Your current committee's thoughts and strategies are listed below:

To attract more committee members by changing our constitution to read that associate members can hold executive positions. At the moment only full Indian owners can be in such executive roles. This will be raised for amendment the special general meeting to be held mid April (see separate notice in this edition), but in the meantime the secretary can hold extra seats such as the current vacant vice president position till our AGM.

Next, monthly meetings to become quarterly, the same as monthly association runs, and 2 major rallies instead of our current 4 a year. So the Crazy Horse and the Sitting Bull rallies will survive, the Rain in the Face and the Teepee Rallies cancelled at this point in time unless interest increases.

Other things like Association Rides to be short Sunday coffee meets say at the Calder BP or St Andrew's pub where masses of cars and bikes meet on Sunday mornings. This works with lots of other groups and the majority don't want to a long a ride, max 250 klm

Our quarterly meetings need a revision as well to be held in maybe a hall and not catered as in a pub situation as most other clubs do, no noisy pubs with unreliable meals or sharing with screaming kids. A suggestion that the meetings are announced in e- mag Smoke Signals at least a fortnight before and of course the quarterly ride the following Sunday announced in the calendar at the same time seems logical as well.

If these changes work then great, perhaps we have been offering to much and if these events are limited it may create more interest, what do you think, we are blazing a new path and we need your help, if things are changing then so can we.

Your Secretary and acting Vice President

Phil Pilgrim

Notice Of Special General Meeting

Of Members of The Iron Indian Riders Association of Australia Inc.

Commencing at 4-30 AM Thursday April 20 2023 at rear, 3 Edwards Court, IVANHOE, Victoria

The SOLE purpose of this SGM is to vote to make the necessary changes to our constitution that will empower our new president, in his words, "to make sure no one is excluded for any reason at any time and it will be a commitment of mine to ensure something is entered into the constitution to prevent exclusion for any paid up member for any reason whatsoever".

Given the location and time of meeting, all Members are strongly encouraged to appoint Phil Pilgrim as their proxy, who will exercise votes, as you direct, on your behalf.

Currently Section 14 of the constitution is as follows:

14 Associate members

- (1) Associate members of the Association include—
- (a) any members under the age of 18 years; and
- (b) any members other than Life Members who ARE NOT the owner of a Club Eligible Motorcycle; and
- (c) any other category of member as determined by special resolution at a general meeting.
- (2) An associate member must not vote and cannot hold the committee position of President, Vic President, Secretary, Treasurer or Machine Examiner/Safety Officer but may have other rights as determined by the Committee or by resolution at a general meeting.

The SOLE purpose of the SGM is to vote to change it, through the deletion of parts (1) (b) and also (2), with the revised section 14 to read

14 Associate members

- (1) Associate members of the Association include any members under the age of 18 years; and —
- (2) Any other category of member as determined by special resolution at a general meeting.

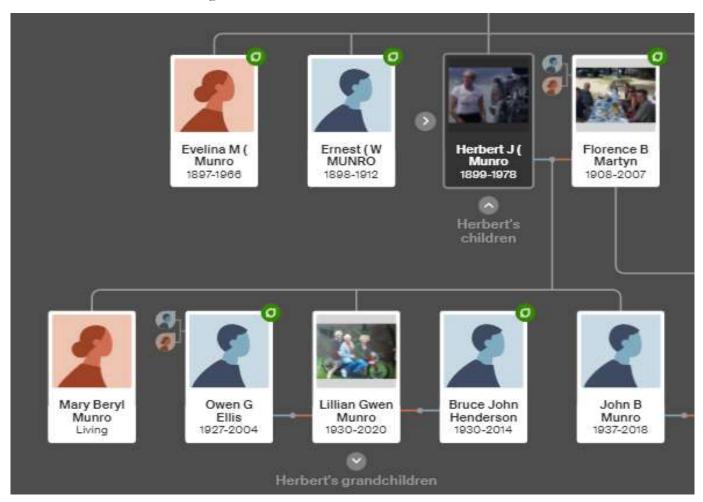
The proxy form is a separate document that you can complete and send online. The link is in the email that you downloaded this edition from. Your proxy form must reach your secretary no later than March 31st. Why not do it now?

Herbert (Bert) James Munro

Indian Legend and an IIRA Connection!

When Herbert James (Burt) Munro and his twin sister Baby were born on, on March 25, 1899, in Edendale, a small town in the Southland region of New Zealand. their father, William, was 28, and their mother, Lily, was 23. He was one of six children born to a farming family. Munro's father was a farmer and his mother was a homemaker.

In 1925 in New Zealand he married Florence Beryl Martyn, the first cousin, once removed of the "Smoke Signals" editor. They had three children together. He died on 6 January 1978 in Waikiwi, Southland, at the age of 78, and was buried in Invercargill, Southland.



Munro grew up on the family farm and showed an early interest in machinery and engineering. He was particularly fascinated by motorcycles, and he began building his own bikes as a teenager. It is clear that his upbringing on a rural farm instilled in him a strong work ethic and a sense of self-sufficiency that served him well throughout his life.

He was a legendary motorcycle racer and inventor who famously set land speed records on his highly modified Indian Scout motorcycle. Munro was known for his innovative engine modifications, including his unique piston design.

Munro designed his own pistons for his Indian Scout motorcycle, which were hand-carved from his home-made aluminium castings. The design of Munro's pistons was based on his own calculations and experiments, and he made numerous modifications to the shape and size of the piston until he found the perfect design for his bike.

One of the key features of Munro's piston design was the use of a hemispherical combustion chamber, which allowed for more efficient combustion and increased power output. Munro also used larger-than-normal valves and porting to improve the flow of air and fuel through the engine.

Munro's innovative piston design helped him set numerous land speed records on his Indian Scout motorcycle, including a top speed of over 200 mph on the Bonneville Salt Flats in Utah. Munro's legacy as a motorcycle racing pioneer and inventor continues to inspire enthusiasts around the world today.



Munro first travelled to the Bonneville Salt Flats in 1962, but he was unable to set a record due to mechanical problems with his bike. He returned to the salt flats several times over the next few years, making improvements to his motorcycle each time. His most famous record was set on August 26, 1967, when he reached a top speed of 183.586 mph (295.453 km/h) on the Bonneville Salt Flats in Utah. This record still stands in the Class S (Special Construction) 1000cc category.

Munro's record-setting run in 1967 was the culmination of years of hard work and determination. His achievement was all the more remarkable given that he was in his late 60s at the time and had limited financial resources.

Despite never having formal training as a mechanic or engineer, Munro's passion for motorcycles and his innate mechanical ability allowed him to develop his own unique approach to engine design and modification. His legacy as a racing pioneer and inventor continues to inspire motorcycle enthusiasts around the world today.

Additional information about Bert history may be found through this link https://www.ancestry.com.au/family-tree/person/tree/186979647/person/232465152468/story

Product Review

THE KELLY KETTLE https://kellykettle.com.au/

Ever since someone helped themselves to my charming little spirit stove, I have been searching for a replacement. I should have done my research long ago and since then have been using a Camping Gaz stove found in a charity shop, or have lit campfires. The latter is not always popular as people become ever more paranoid about the dangers of open campfires and I must agree as I recall one occasion when I could so easily have set fire to an entire continent due to the combustible nature and widespread covering of eucalyptus leaves in a particularly dry area on the 427km Strzelecki Track in South Australia.

I had heard of a type of portable camping stove which uses natural materials to heat water in a flash and, on asking around, discovered there was a device called the Kelly Kettle, supplied by a fourth generation Irish Company.

My first impression was that it is bigger than I had envisioned and when compared with my Camping Gaz stove, it would seem prohibitively bulky for the sort of basic motorcycling I do.



Then I considered the spare Camping Gaz cylinder that must always be carried. A recent trip where I was left for two days with no stove for my morning cuppa taught me never to be without a spare.

The Kelly Kettle pan and handle which come with the stove double as a mug so I needn't carry my usual one, thus saving a bit of space. Dry fuel can even be stored inside the stove's chimney, so all things considered, it doesn't take up that much more room on the bike. I read the instructions, watched the delightfully instructive video on the Kelly Kettle website www. kellykettle.com and several YouTube films of people using anything including camel dung to light their kettles all over the world, and off we went.

The stove consists of a fire base into which the selected fuel is put. Then the double walled chimney, which also forms the water-chamber is put on top and the fuel lit. I decided to start the test with some dry newspaper and within three minutes, enough water for two mugs of tea was boiling. As the experiment took place on a sunny, dry beach I decided to try the next time with some dry seaweed which was not a success as the seaweed would not ignite. The chosen fuel must be very dry and does not need to supply embers so the less dense the better. Bracken worked well but I got the best results on the beach from some dead, dry grass. Anything that flares up does the best job of heating the water which boils

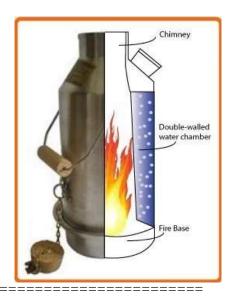
surprisingly quickly. Additional fuel can be dropped down the chimney as required. Don't overfill the chamber or the boiling water will put the fire out!

When you have your hot, steaming cuppa, the fire base will then cook food placed on the supplied grill and there is even a fitting which will hold the lidded pan over the flames whilst the water is boiling. So as you warm your baked beans the water for your tea is heating up at the same time!

The kettle comes in different sizes, the one I chose being the smallest at the moment. I would welcome a smaller version and the manufacturers tell me there are some more models shortly to be available.

The second is a Hobo stove attachment for easy cooking on the firebase. There is nothing else like it in Oz at the moment so get your bike packed with a tent and one of these, enjoy the rest of the summer and never be without a hot drink again.

See the video here https://www.youtube.com/watch?v=TMCR-ie9H_w



IIRA Committee Elections 2023



By the time you receive the next edition of Smoke Signals the AGM on (July 25, 2023) will be near and that includes election of your committee. This is your opportunity to make a positive contribution to your club.

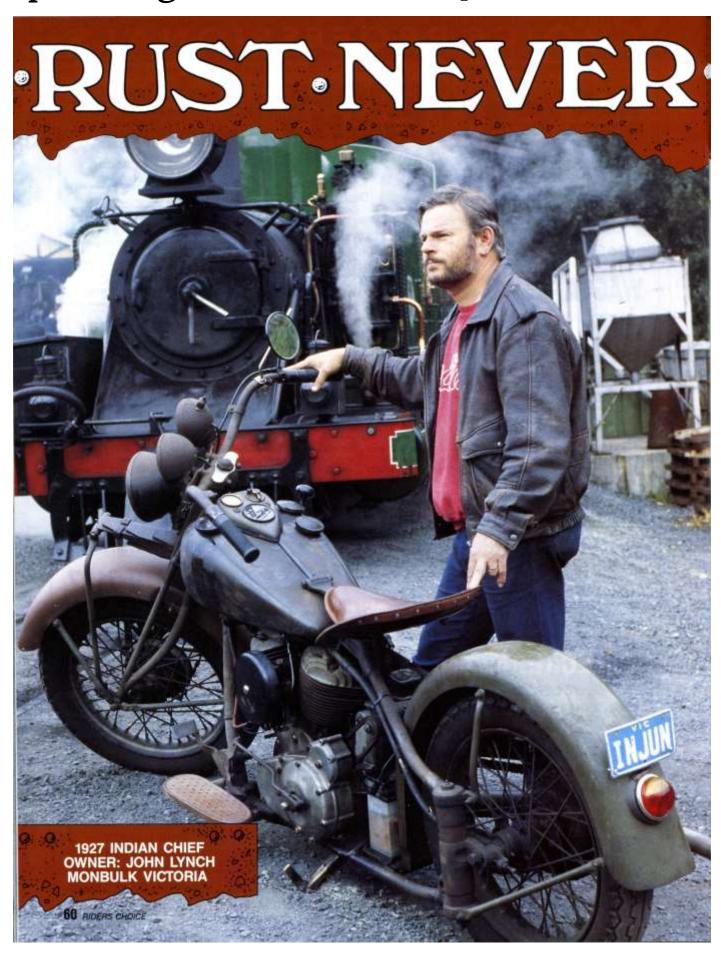
Every committee role will be declared vacant, so start thinking now as to how you can be involved. Please, no wilting violets because with no one standing for vacant roles the club will cease to exist – Do **You** want to be responsible for that?

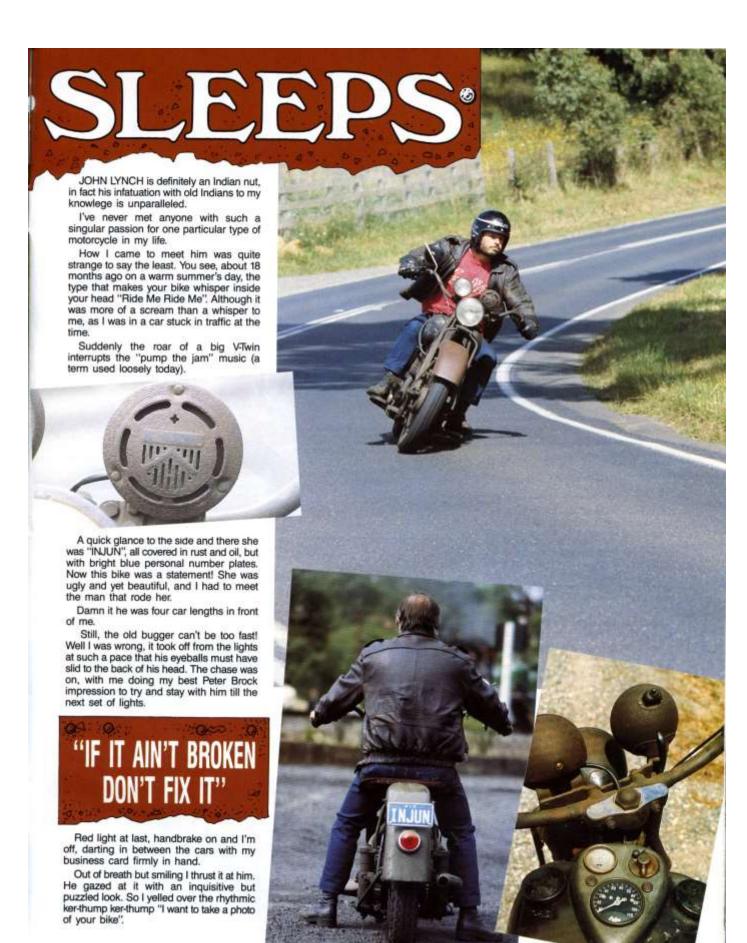
Further AGM information and nomination forms will be emailed out after the Special General Meeting (see details in this edition).

IIRA AGM, 2023, will be held on July 25 at a time and place to be advised

Please update your diary now.

Spannering – Tales from the workshop







The inquisitive look turned to sheer amusement, then came his reply "what this old thing? I've got heaps of 'em in the shed, we'll see". The lights changed and he was gone, leaving me in the middle of a busy intersection with my jaw dropping to the road.

Nearly a year went by with me making several enquiries with locals only to come up with bugger all. Until one day at the scene of a car accident. There he was again, looking slightly dazed with blood running down his leg. This time I didn't let him get away.

As it turns out John Lynch is quite a guru when it comes to "Indians".

His passion began 28 years ago when he purchased an ex-military Scout for 10 quid at the age of just 14, from a bloke called Ray Thompson. It must have been love at first sight, because now at the age of 42 he's hardly been without an Indian of some sort.

In 1981 he made the first of four trips to America where he straightened out the kinks in the two Chuck Myles Indian Hillclimbers which have now have become legendary, winning many first, second and third placings. Bikes which previously had run for 14 years without even coming close to winning a race.

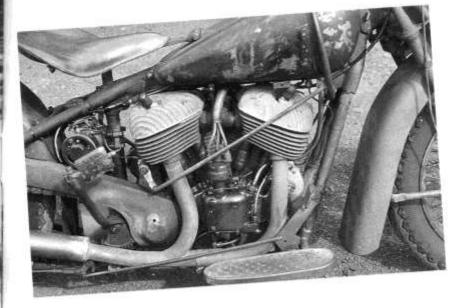
John first met Chuck whilst in America looking for some 80 inch parts to build a motor with Bonneville cams and lifters



(that's Indian Bonneville, they name some bikes after tracks where races were won) special heads and special pistons made by a guy called Charlie Robins in California which was to produce 75 horsepower.

John stayed with Chuck in the U.S.A. for 3 weeks visiting swap meets, hillclimbs and meeting many Indian enthusiasts and has been back three times since then.





Now he can just phone up one of his dozens of contacts, quote his Visa Card number and the parts arrive in the mail.

"INJUN" itself was originally purchased from the army by Roy Thompson of Alphington (Vic.) then sold to Frank Seares of Black Rock (Vic). A tip-off from one of John's mates found him rummaging through Frank Seares shed to find "INJUN" covered in oil and pine needles.

An undisclosed amount was accepted and John wheeled away a very sad looking Indian whilst holding back a wry grin.

Once at home John set himself to work at getting it running, a quick look down a spark plug hole revealed a stuck exhaust valve. After a short spray with C.R.C he then gave the valve a light tap with a screwdriver which saw the little bugger pop back into place.

New tyres, oil, battery, petrol and a huge kick in the guts was all it needed to fire her back to life. "CHROME DON'T GET YA HOME."

"INJUN" gave John 3 years of reliable riding including a trip around Tassie with THE OUTCASTS MC. A club John has been a full member of for 22 years.

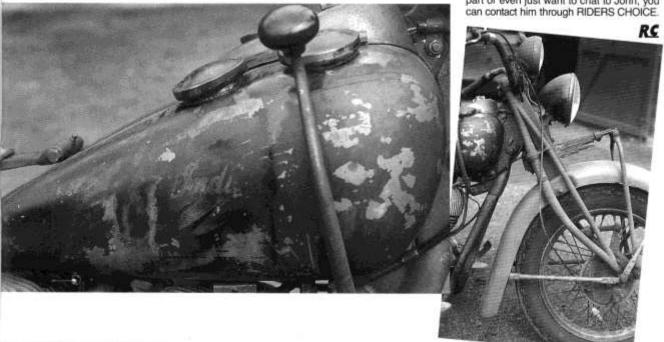
Then one day while "giving it to her" down the Eastern Freeway she broke the drivepin and caused major flywheel damage.

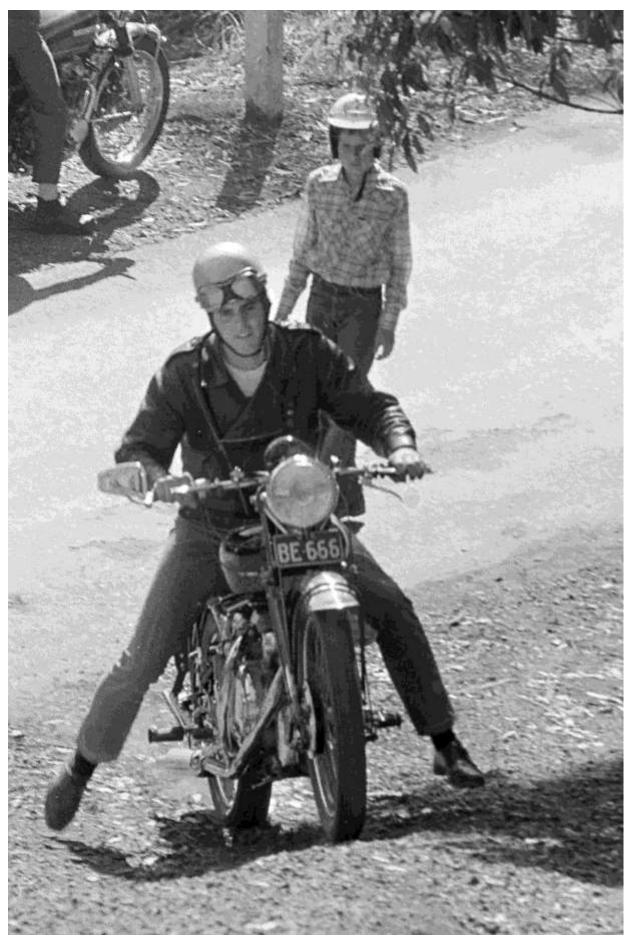
So John thought after 45 years of service it was time to rebuild the donk.

"INJUN" then received a lot of race goodies thanks to Tom Paradise in the U.S.A., like a set of flywheels that won the national titles and some Bonneville cams and lifters. Then to put the cream on top, the donk was balanced and blueprinted by Eddy (Fast Eddy) Tworkowski from Mt Macedon (Vic). Fast Eddy is building about one Indian motor a week and can manufacture most bits that are hard to buy.

But as you can see John's not too fussed about the appearance of his ride. Maybe it was the stench of burning oil dripping out he side of the oil pump or just the smile on John's face when he rides it, but it somehow gives off an aura of being loved. One of John's favourite phrases gives you a clue to his philosophy with "INJUN"—"CHROME DON'T GET YA HOME".

For further information on INDIANS or if you are having difficulty in finding a rare part or even just want to chat to John, you can contact him through RIDERS CHOICE





Who is this hoon? (sorry, no prize)

Future IIRA Seasons' Events — update your diary now

When	What	Where
Autumn 23 (Mar- May)		
Mar 28	Club Meeting	Cross Keys Hotel
Apr 2	Club day Ride	See web site
Apr 20	Special General Meeting	4-30 AM @ Ivanhoe
Apr 25	Club Meeting	TBA
May 7	Club Day Ride	See web site
May 30	Club Meeting	TBA
Winter 23 (Jun-Aug)		
Jun 4	Club Day Ride	See web site
Jun 27	Club Meeting	TBA
July 25	Annual General Meeting	TBA
Aug 6	Club Day Ride	See web site
Aug 29	Club Meeting	TBA
Spring 23 (Sep-Nov)		
Sep TBA	Crazy Horse Rally	TBA
Sept 26	Club Meeting	TBA
Oct 1	Club Day Ride	See web site
Oct 31	Club Meeting	TBA
Nov 5	Day Ride	See web site
Nov 28	General Meeting	TBA
Dec 5	Day Ride	See web site



INDIAN UPRISING DEVASTATES ROADHOGS

BY CHIP TILTON

LAUGHING INDIAN GETS GUTS SPILLED ON TEPEE FLOOR



Chief Charley Mathre with Squaw Lois and an unidentified wooden friend.



An old dead chief's erect member. The rusted, encrusted, scattered and battered remains of our "injun" story.



AIMCO Tribe: Medicine Man Bob Roach, Paul Lockridge, Dan Reese and Don Gage.



Mike all bottom-end rollers during tear-down.

Like the people it glorified, the Indian Motorcycle means many things to many people around the world. Stealth, stamina, fleetness, tradition. Like the people it was named for we haven't heard much about the Indian Motorcycle. This being the age of nostalgia — time for reviving old acquaintances — with snows melting — grasses greening and spring beginning to roll out before you on the open road, let's examine the venerable old Indian.

Indians have always been known for their simplicity and reliability — for the remarkable flexibility of their "injuns."

Indian pioneered the introduction

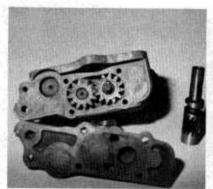
of forged, machined steel cylinders; the free engine clutch and hand lever control; electric starter; complete road lighting; the skirted fender, and many other design features that became standards for the industry. But damn if the Elders weren't maybe just a little too sharp for their own deerskins. During the war years, Indian production was destined for military consumption, with the "laughing Indian" providing the gobs of torque necessary to deliver supplies to the fronts and stealthily return many wounded to the flanking hospitals and safety. From the Sahara to Siberia the Indians were the pride and joy of thousands of hack jockeys.

Military planners called on Indian to develop a super-lightweight scoot, for use by airborne and paratroop. Indian tooled up for the new . . . dirt bike?

Those Chiefs were wise as hell! Well, the war ended and contracts were canceled — but the Elders thought, maybe the general public might go for a new series of high-performance, light-to-moderate-weight motors.

The new models stimulated enough interest, spearheaded by the Indian name, to keep plenty wampum in the coffers. But now comes heap big trouble. The Big Chiefs decided to make peace with the paleface. After

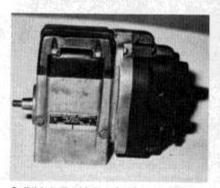
CHOPPERS - AUGUST 1976



Check the oil pump gears where indicated, and check the plunger for wear in the bore.



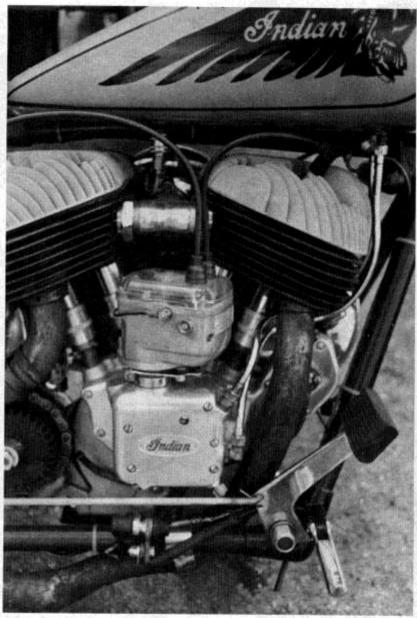
Check distributor shaft and housing bushings for excessive wear.



Sell this to the highest bidder at your local swap meet.

many, many talk leaves crossed the Great Lake Where the Sun Rises — Indian Sales Corporation was formed to act as agents for the enemy! AJS (Always Junk Stuff); Norton, like "Honeymooner" Ralph Cramden's sideman — just up from the sewer; Matchless — like my breath and your socks; Royal Enfield — where you usually found them; and Vincent, whose Shadow finally completed the dismal picture.

Indian tepees, all over the Great Nation, began to fold. Again, mirroring their history, the last great Indian Chiefs were to be found primarily on reservations — military reservations; joints rusting and drab skins blistering



A popular magneto conversion shown on a 74-inch Chief.

and peeling in the weather.

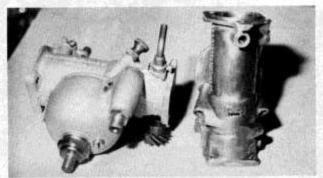
Alas, there is a friendly Indian agent riding off in the sunset. In fact, there is a whole new tribe thriving and regenerating out there in the wilds of the last frontiers.

Today there are about 30,000 braves astride the old work horses, the world over! Most of them recognize Big Chief Charley Mathre as that Indian agent riding in the sunset. Chief Charley and his squaw Lois are the owners of American Indian Motorcycle Company.

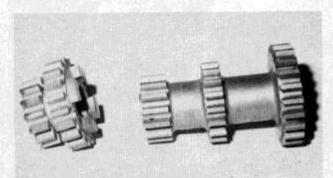
The AIMCO tribe is now camped in the Mokelumne Hill lands of northern California. An area worthy of any great Powwow the Indian Nation might care to have. But more on that later.

We visited the AIMCO tribe to find out why "Old Indians Never Die." What follows is good medicine straight and true from the horse's mouth.

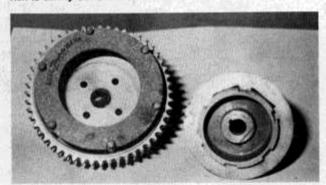
The most popular mounts for custom chops are the 74-inch Chief and Bonneville Chief. AIMCO rebuilds these engines at the rate of one per week. Warriors from all over the world ship their hearts in for good medicine at the hands of Medicine Man Bob Roach. The other braves at the reservation are: special machinist Paul Lockridge, former Indian rider and the man responsible for much trick tool and die work during his four



The downright cherry Linkert mixmaster. The original factory carbs have the Indian name stamped on the throttle body.



If your teeth don't look like this, make a visit to Jimmy Carter's dentist.



If you've been dumping the clutch for many miles the discs and plates won't look like these new items.

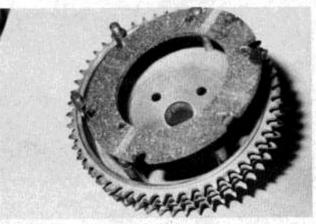
years with AIMCO - in fact, the man responsible for just a lot of trick shit with various precision tool and die outfits during his 36 years as a machinist; Dan Reese, Indian rider and parts manager with AIMCO for three years, the warrior responsible for getting you the right parts; and Don Gage, Indian rider and shipping and receiving brave, the man responsible for getting all your goodies back to you, whether you live in Alaska, Holland, The Philippines, an Iron Curtain Country or one of the really big tribes from down under, Australia and New Zealand. There's evern some weird tooth dude from Transylvania who only takes his Chief out at night, and keeps ordering coffin tanks and gooseneck frames. Like I said man, the Indian Nation is spread all over the world. Not bad for a bike that was last made in 1953.

The motto says "Old Indians Never Die," but someone out there tried to prove 'em wrong. This engine was sent to AIMCO by Bob Bitchin, Editor of the fine "scratch sheet" Biker, for a complete new bill of health. The bike was one of seven or eight found out back of a barn on a farm in Texas. The bikes had been "stored" in the field by the farmer. They represented his entire inventory of machines when he was the local Indian dealer. When Indian went out of business, the agent

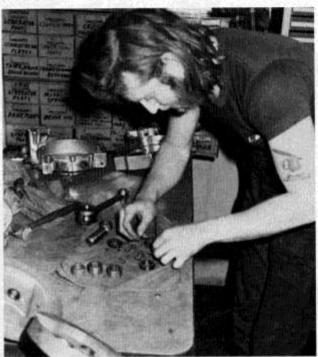
parked them in the field out back. There they sat for the past 18 years.

Medicine Man Bob says it took three men, much firewater and several peacepipes, along with a seven-pound tomahawk, black powder, a porta-power and finally a cutting torch, to bare the guts of the old Chief. The barrels were pried from the cases like Custer's scalp. The primary chain and sprockets were rusted into a solid unit — able to stand by itself like an old dead chief's erect member. The bottom end was filled with enough rust dust to retire on had it been gold dust. I hope your motor comes apart easier.

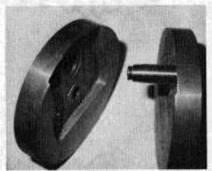
When you tear down, try to keep all



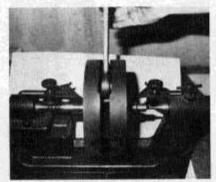
Tricked disc for eliminating slipped disc while slipping trick trap.



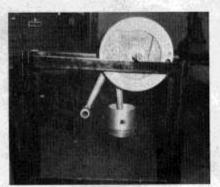
Medicine Man Bob Roach selects oversize rollers to obtain .0005 to .0015 clearance for both rod and main bearings.



Be sure to align the oil passages for the pinion shaft and the pinion wheel, and the pinion wheel and the crank pin.



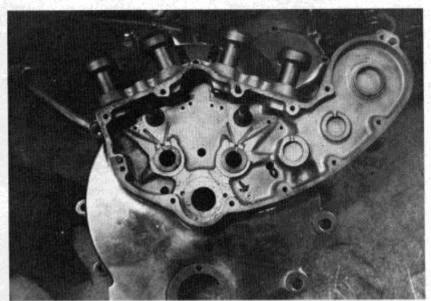
Truing the crank for optimum performance and balance!



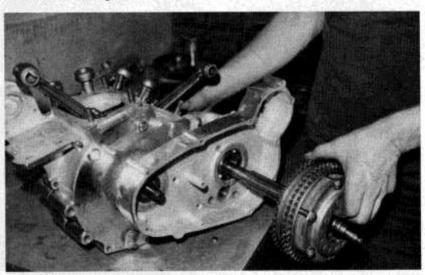
When you're hot you're straight, when you're not, you're shot!

take a look at that ignition system. If your engine came with an old Splitdorf-Edison magneto system, shit-can it, or sell it off to some collector at your local swap meet. Parts for the unit are as rare as hen's teeth and as functional as worms for Polish ice fishermen. If you want mag power, go with the popular loe Hunt conversion.

The original distributor is a good, sturdy unit made by Autolite. It looks like an old Ford flathead job. Check the shaft bushings for wear. Again, this is subjective; as far as original specs go, they don't exist for this check, but figure .008 is too much for right-on timing. Once the bushings and shaft are set up, install new points and con-



To improve cam and lifter oiling, plug front drain hole and drill new hole at "Y". Note Value holes at lifter guides.



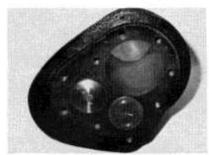
Install mainshaft into the transmission case, with the slider gear in place.

denser and set point gap to .020.

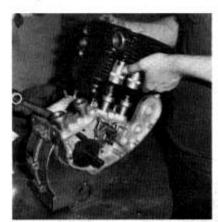
Last but not lost, that beautiful original Linkert carburetor. Clean with a good cold parts cleaner and for super looks give that sucker a bead job. The copper throttle body and aluminum float bowl look almost cherry after a bead job. Blow passages and orifices and install new needle springs and float valve and seat and new gasket. Make sure the low and high speed needles aren't damaged from bottoming out on the jets. Little ridges can be a source of poor fuel mixing in the /enturi. The assembled carb is a work of art if you've glassed the gasser. The satin finish is downright cherry now. Another tip on the Linkert mixmaster. This unit is perfect for the brave who likes to travel — the easy adjusting needle screws let you tailor the mixture while you ride; change altitude — change the mixture, pure and simple.

For the performance warrior, AIMCO recommends their easy to obtain 38mm Mikuni, complete with machined aluminum adapter, hose and aircraft screw clamps. They say this unit will peform — like a kitty in the city, to your amazement on the pavement.

With the small stuff out of the way, let's cover the transmission and clutch work next. The reason for doing this now is that we will want to use the



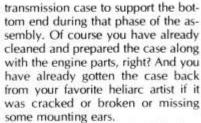
A completed cylinder barrel with 60-degree cross-hatch pattern, the result of a perfect hone lob!



Align the valve covers and the intake manifold nuts before the final torqueing of the barrels.



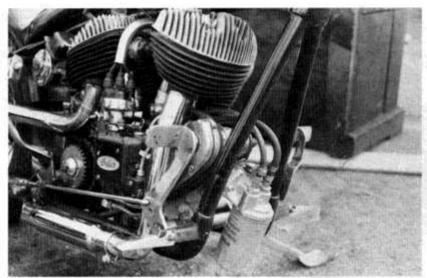
The standard trick application of aluminum paint to the head gaskets for permanent bondage to the barrels.



We'll tackle the inside of the box. The most common areas of wear on this crash box are the slider gear and the cluster gear itself. The unit is a gem of simplicity, so you might as well get it right from the start and you can forget about any problems for many moons to come. Check the slider gear for wear on the drive edges of the



Medicine Man Bob primes the oil return side of the pump, to insure proper lubrication at the fire-up!



AIMCO's dandy oil filter conversion kit, installed on an Indian Chief. Think about it!

splines and for rounded and gnarled teeth and dogs. Again, when in doubt throw it out. If the cluster gear teeth look OK, all you want to do is replace the bushings. Check the cluster shaft for any signs of wear at the journals. If there is the slightest wear on the shaft, order a new one. Hone or ream the bushings to size and set end play to specs. Next check the mainshaft for wear on splines and bearing journals and replace if necessary. The mainshaft bearings usually need replacement at this time. If you want to go trick and trouble-free with this box, the hot tip is to seal the trans by using sealed bearings on the mainshaft, clutch sprocket seals, freeze plugs at the cluster shaft bores and the oil passage hole to the primary case, and lots of 3M sealer or Silicone Sealer. This allows you to run regular 90-weight gear lube in the transmission, and a nice, light 19-weight oil for the primary chain and clutch side. If you go the sealed setup, be sure to put some kind of breather in the trans lid and the primary case. There is already a boss on the trans lid waiting to be drilled for the breather, and the primary filler plug can be drilled and tapped to fit a drilled Allen set screw. Put a small piece of foam in the set screw to act as a filter. To wrap up the trans, replace bushings for the shifter mechanism in the trans lid.

Cont'd on page 58



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Now grab a nice cool one and relax while you finish up the last little chore before the engine itself. The clutch sprocket bushing usually needs replacement. Check the clutch disc locating studs for looseness in the housing. It is usually possible to peen them tight again, but don't weld them unless you want to replace the complete unit on down the line. Check the friction discs for wear, particularly where the fiber discs contact the locating studs and where the metal plates contact the driven hub. The hub itself should not be gouged or grooved. Replace the hub if necessary.

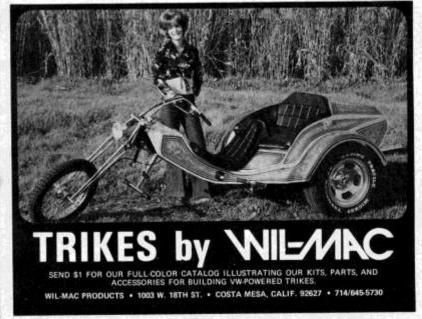
If you want to trick up your clutch, especially if you're running the sealed transmission and case, drill the metal plates with eight holes per plate. With a 3/16ths drill, cut eight grooves, 5/16ths wide by 1/8th deep, in each fiber disc. Cut the grooves four per side, perpendicular to each other. This makes a good, slick operating unit with the ten-weight oil. Replace the springs and the chain if necessary. Assemble the clutch and the throw-out bearing. Replace the throw-out bearing if it is worn at all. A good hightemp grease will do wonders for the bearing.

Now for the real serious work. Check the drive and pinion races for orange peel effect, rusting and pitting. Refer back to your notes for the specs on the main roller bearings you removed during tear-down. If they were standard size, and your races need honing, pray to the angel of firewater

that you don't have to hone more than .003 over. It is very difficult to get rollers more than .0015 over size. If races require an extensive hone job, replace them with new parts and matching rollers. Hone races to obtain a .0005 to .0015 tolerance. Here we begin to see why Indians are so reliable. They are tight, precision machines. Once drive and pinion bearings are set up, protect with WD40, and keep very clean.

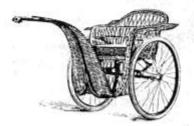
Next take the rod set and inspect for straightness and cracks (Magnaflux or Zyglo) and check races for orange peel, pitting and wear. Normally the female races wear on the thrust surfaces and must be replaced. When installing the races, center the male race in its rod; the female races are pressed so that the inner thrust surfaces are flush with the inside of the "thighs" of the rod. Hone the races to obtain .0005 to .0015 tolerance. Again, if you have to hone more than .003 over to clean up the races, replace them. Check the wristpin bushing for clearance and replace if necessary. Hone bushings for a pin fit of .001 to .0015. Indian features a full floating pin, so you can hone the new pistons at the same time, if they need it. Once the rods are set up as described, the clearance between the male and female rod is automatic.

After cleaning and blasting the wheels, install the crank pin and drive and pinion shafts and torque down. If you have wheels marked with a "Z," torque to 100 ft./lbs., or to 75 ft./lbs. if not marked (the Z wheels are made of a stronger material). Back off the nuts



and see that the crank pin and the shafts haven't pulled through the tapered bore. The nuts should snug up on the wheels, not the shaft shoulders. Replace the wheels if necessary. Now assemble the rods on the crank pin, with thrust washers, AND align the wheels by eye and snug up nuts, all the while checking rod freedom. You'll need to have a final rod-towheel clearance of .010 to .020. Adjust as necessary with equal-thickness thrust washers. AIMCO sells these in .062 sets, which generally fills the gap. However, if these washers set up too tight, you must have access to a surface grinder to remove the necessary material. Remember, remove material from only one side of each thrust washer to obtain the final clearance. Remove shafts from wheels and

reassemble, making sure the oil passage in the pinion shaft aligns with the passage in the pinion wheel. Torque to specs and install retainers. Assemble rod set with a good thick lube and fit crank pin to wheels, again aligning oil passages. Torque the nut on the oil side to specs and the off-side nut just snug. Mount the crank assembly in a truing stand and align and true the Cont'd on page 60



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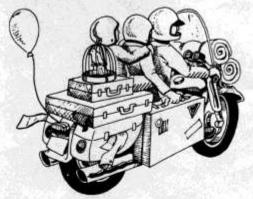
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Cont'd from page 59

wheels. Torque the second nut and install the nut retainers.

At this point you need to balance the whole rolly-polly mess. If you have never done this, leave it to a pro. If you have you'll know what to do. Medicine Man Bob says one completely assembled slug plus one good OZ, bagged or otherwise, will balance you out to 65 or 75+ miles per hour.

Now take the pinion side case and we'll trick up the oiling process. Medicine Man Bob says to drill 1/8-inch holes, one on each side of the four tappet guides, clean through the case. Also plug the front oil drain hole securely, with round stock. Drill a new drain hole at the "Y" of the idler gear boss (see photo). This keeps more oil in the cam box by raising the level of the drain hole. After cleaning the drill chips out, fit the crank assembly to the cases and bolt with several studs. Check the crank end play, without installing the drive sprocket. Adjust with thrust washer to obtain .015 to .030 end play. Now install case gasket and sealer and bolt the bottom end together. Install the drive sprocket and torque to 100 ft./lbs. The end play should now be .005 between sprocket and thrust washer.

Check your cam bushing for wear and replace if necessary. Check the cam followers for wear at rocker shaft and check the roller for internal and external wear. Replace roller and pin. If you are looking for a little soup, AIMCO has the factory trick Bonneville cams available for \$105 outright. Install your cams and time everything. Bolt the cover on with gasket and sealer.

The lifters or pushrods can use some attention next. Clean up the adjusting screw tips if they are worn. To improve oiling, cut a quarter-inchwife flat surface the length of the lifter. This allows the oil to penetrate the guide more thoroughly. Install the lifters and fit the oil pump to the case at

Now take the transmission and bolt it to the engine for support during the

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final assembly. Install the mainshaft into the trans, with the slider gear in place. Snug up the unit and check the mainshaft end play. Adjust to .005 with thrust washers. While we are in the primary case, replace and fit new generator drive shaft bushings. Use thrust washers to obtain the proper alignment of the drive sprocket to the third row of the primary chain. Install new gasket and sealer and torque cover down evenly.

I hope you all are as ready for some more firewater as I am. We approach the summit, onward and upward! Normally you have to replace the valve guides, as oiling is insufficient in this area. The book calls for .375 to .382 for guide bores. If yours are over .382 replace them. The valve stems should be between .365 and .370. Replace the valves if they are under .365. Reface the valves and seats at a 35-degree angle. Indian calls for 35 degrees for two reasons. First, the lower seat angle improves gas flow as the valve just starts to open and as the valve almost closes. Second, the lower angle reduces the effect of valve seat distortion. In view of the second reason, your valve springs must have full tension to maintain a good seating and sealing pressure. Valve spring length should be 2% inches. The tolerance is 3/16-inch but for maximum performance and service, I recommend replacing every time you go into the top end.

The cylinder bore is the next phase. AIMCO offers complete sets of pistons up to the maximum recommended overbore. If you have to go more than .060 over to clean up the bores, you must resleeve the barrels. A complete set of pistons and pins and ring, upper rod bushings and sleeves for a 74-inch Chief totals \$64.50 from AIMCO. See why we were able to buy Manhattan so cheap! The final piston-to-wall clearance should be .004 for standard and .006 for the Bonney Chief. Be sure to get a nice 60-degree crosshatch pattern for maximum life and ease of break-in. After boring and honing, be sure to wash barrels with soap and water to remove all grit, then pro-

Cont'd on page 63

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Cont'd from page 61

tect with WD40. Fit pistons to rods and set ring end gap to .015. Install rings with light oil, Install new barrel flange gaskets with sealer and fit barrels over slugs. As you lower barrels to case, align valve covers and intake manifold, starting threads enough to hold in place. Now torque barrels down evenly, using crossover sequence. Next adjust the valve clearances to specs. Time and install the distributor.

Rotate the crank by hand to make sure everything is doing what it should, freely and with no binding. OK? Now break out the aluminum paint and coat both head gaskets. Let them dry for a few minutes while you run a tap in all the head bolt holes to clean and true them. Blow with air and shoot some WD40 into each. Install gaskets and heads and torque to 55 ft./lbs, using a triangular sequence. This procedure will keep your head gasket in place for many miles.

Next prime the oil return side of the oil pump. Bolt on the carb and get ready for the climax. Like any good release, let's build the tension. Grab another brew or whatever and sit back and think over everything you've done. Try to recall if you put the retainers on the crank pins — little shit like that. When you're ready, come down on your baby full force.

Medicine Man Bob says run just above idle for two or three minutes. Check the oil circulation for leaks. Shut down and retorque the barrels, the heads, the manifold nuts and the

Cont'd on page 65

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Cont'd from page 63

three carburetor mounting screws. Refire the engine and retard the spark. Adjust the low speed screws until you get a smooth idle. Set the timing and move out on the road. In second gear, run up to full throttle while you adjust the high speed screw to obtain smooth acceleration, then set two notches rich.

Never lug the engine, but don't run it flat-out either. Take a few full throttle charges from 35 to 55 mph in third gear. This will quickly seat the rings without scuffing. After 30 miles, retorque everything. Give the motor at least 1000 miles to fully break in. Good engine care is common sense. AIMCO handles a dandy full flow oil filter setup. Think about it.

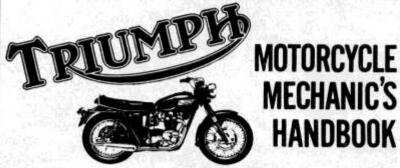
Medicine Man Bob says, "Run some top oil through every 15 or 20 tankfuls." His philosophy for Indians - "Hold all specs on the tight side; if it needs replacement . . . do it." Indian parts are quite inexpensive by comparison. If you send your motor to AIMCO, rest assured you'll get good medicine back. Bob says if "he'd use it in his 1947 Chief he'd ship it to you." That's saying something. Medicine Man Bob finished with the frontrunners on his '47 Chief in the recent California 500. He says a properly cared for motor will easily go 20,000 to 50,000 miles before the top end needs attention, and 100,000 miles before the bottom end needs work.

So if any of you Chiefs, Braves and Warriors want to emulate the great Cannonball Baker, Indian rider and transcontinental record-setter, putt your butts out to Mokelumne Hill, California, and say How and Yut Te Hey to the good folks of the American Indian Motorcycle Co. tribe. Charley and Lois Mathre have a beautiful place for you to camp and swap lies. Write or call for complete parts and price lists, directions, or just some good old jawin' to: Rt. 1, Box 9A, West Point Rd., Mokelumne Hill, California 95245. If you have an emergency breakdown, call (209) 286-1232 or nights (209) 286-1209 and your needs will be given top priority.

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