

Indian

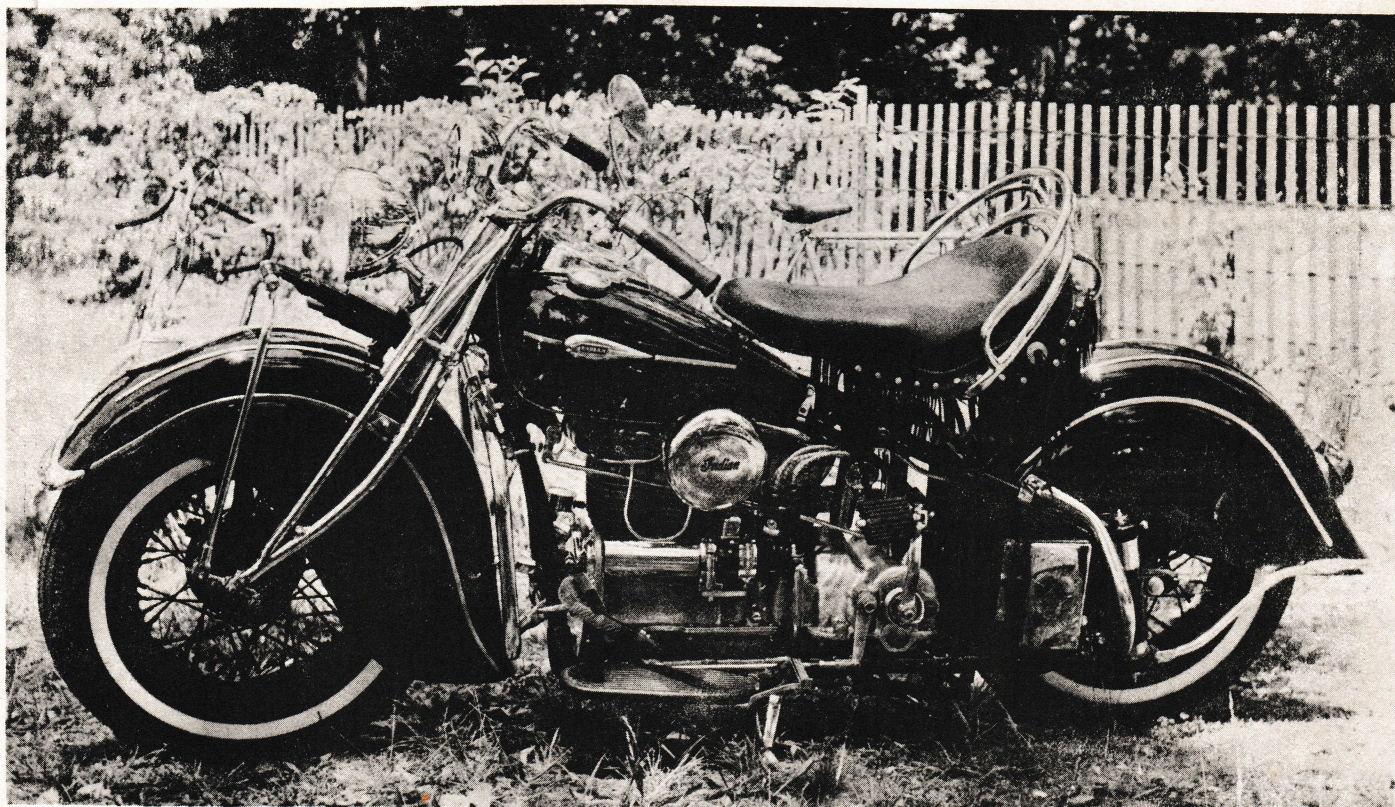


FOUR MOTORCYCLE NEWS

VOLUME 11 NUMBER 4

WINTER ISSUE 1976

15Th Anniversary



AMERICA'S MOST BEAUTIFUL MOTORCYCLES

PUBLISHED BY THE INDIAN FOUR CYLINDER CLUB, INC.
FOR ITS MEMBERS

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COVER PICTURE

Something different in a cover picture this time. One of our members wrote and asked that we leave the background in the picture for once which we usually block out. So, we have on the cover of this issue the beautiful black and chrome four owned by Joe E. Hassett of Astabula, Ohio. A masterpiece of restoration.

The Indian Four Motorcycle News is published four times each year for the members of the Indian Four Cylinder Club Inc.. Price of the magazine is included in the membership fee of \$12.50 annual dues, mailed to the treasurer, Jim Cook, 3608 Reimer Road, Norton, Ohio 44203.

The Indian Four Club is a non-profit club, incorporated in the State of Ohio. The Indian Four News is published by Thomas J. Miles, Printing and Photography, RR 5 Box 2, Findlay, Ohio 45840. The Indian Four News is available to non-members for \$10.00 per year contribution or \$2.50 per single copy mailed to the treasurer. Applications for membership in the Indian Four Cylinder Club should be sent to the Treasurer.

EDITORIAL

We apologise for the lateness of the Winter issue of the Four News but part of the reason is no news. We held up publication till the last week of February and decided we have better get it out to allow time for the Spring issue.

We did not receive the President's letter so we decided to add an editorial page for the first part of the news. We were also in hopes of receiving a letter from the new Vice President as an introduction to the club but no letter was received.

There were several items in the mill for the News to aid in engine overhaul and other integral parts but none have yet been received.

We have printed in the last 2 issues of the Four News newspaper clippings sent to us by a cousin living in Flint, Michigan. He is a retired newspaper man having served as editor of papers in the south, far north and presently retired from the Flint paper. One of the recent articles was an editorial written by a New York news correspondent on executives who have turned to motorcycle riding too and from their job. One is a Magazine Executive who rides a big new Honda and has since purchased an agency in New Jersey which is one of the large ones of the east. He enjoys cycle meets and often rides to them, returning to his office with his Honda tucked in his big private jet eliminating the return trip.

We have written to the gentleman in attempt to kindle his interest in the Indian fours or Chief. We further told of the Four Meets and the very beautiful restored machines that we see at the Four Meets. An answer to our correspondence will be printed in the Four News.

We have written other celebrities who we have learned owned Indian Fours but have never received answer to our letters.

For the past two Annual Meets we have made arrangements for attractions at the meet other than motorcycles. Our son and family have attended with their old Maytag washing machine and several small older model gasoline engines. Also a Findlay man has large collection of larger gas engines and has brought two of these to the meet on the back of his pickup. Most everyone was fascinated with these motors and the putt - bang that we haven't heard for many years. Our son and his family will not be there this year for they are moving to Johnson City Tennessee for his company. So we rather leave it to some of our members and friends who can entertain us with something different. Do you have some sort of collection that others would like to see, or does a friend have a unique hobby that would interest us. The open framework aircraft we saw at the airport last year named Breezy was a thriller for the members and friends of the club to see but none of them seemed to want to fly in it.

A few comments about that wild winter weather we had back in January. Findlay like Tiffin were paralyzed by 8 and 10 ft snow drifts and it was some time before U S 224 between the two towns was plowed open. We used our Sno-pup blower to clean our drive 3 or 4 times but we did not have excessive high drifts to plow through. Heating was no problem to us for we heat with No 1 fuel oil and electricity. We were however involved with gas heat at the Administration Bldg. of the Findlay Schools where I work as their printer. 65° is really no temp. to run an offset press in. A bad problem in Findlay was the deep penetration of the frost where it broke many city water lines. Water shortages have resulted from these problems and the only hope is a good spring rainfall to refill many of the small communities reservoirs.

We have given you some of the items of interest from Findlay so how about hearing from your local corner.

Thomas Miles, editor

On the next page is advertizing for the June meet sent to us by Paul Pearce, President of the All American Indian Club and member of the Indian Four Club. At the '76 Annual meeting motion was made to hold the June meet for 1977 at the Dux Club near Lambertville, Michigan. Both Clubs meeting together shares the expenses for grounds rental and other expenses that are required at the Seneca County Fair Grounds for the Annual Meet.

In the letter that Paul wrote us he stated that there will not be a gate charge for entrance to the grounds but raffle tickets will be sold on the grounds for the two days to help defray the expenses. A Wiener roast is planned for Saturday nite and those present will be asked to chip in to help pay for the refreshments.

We urge all members living close enough to the Dux Club to attend the June meet this year and make plans to head for Lambertville, Michigan June 18-19, 1977. Flea markets will be on hand as usual the one main encouragement for someone restoring whatever Indian model they own to go and see if they have what they need to finish the job.

Like other meets you may have attended beside the flea market and the host of cycles, your friends will be there, so whether by cycle, camper or just in your car plan to attend the '77 June meet.

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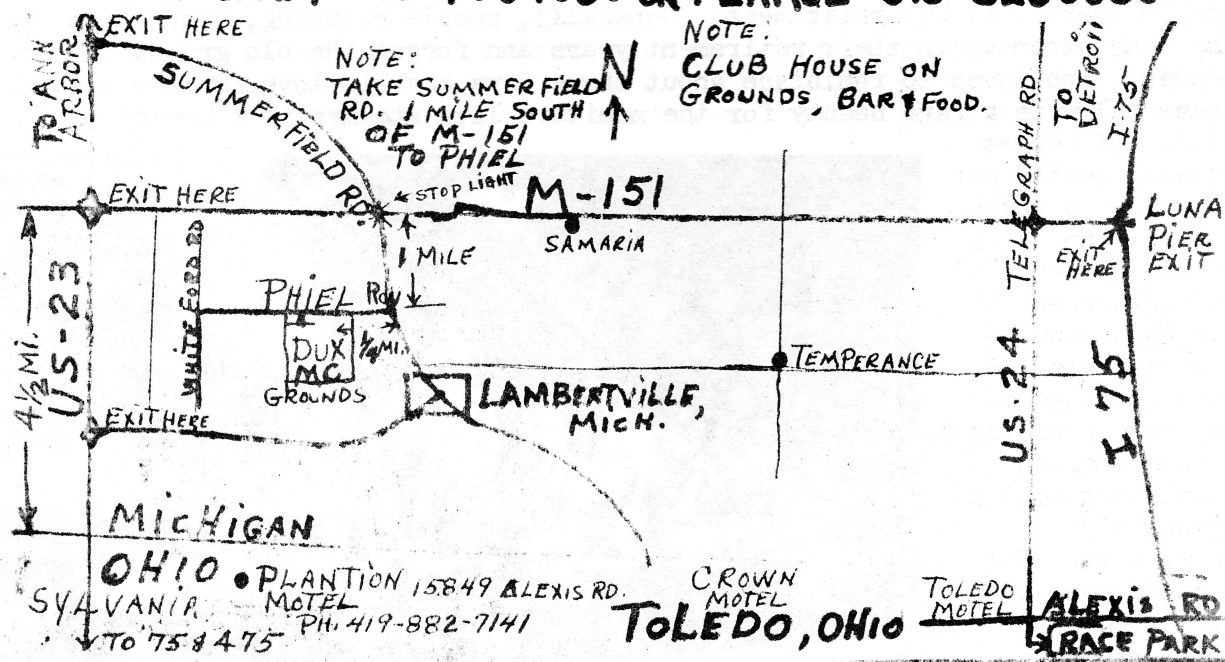
While wer're on the subject of meets for this year and since we are a little late with the winter issue for '76 we thought we might as well announce the dates for the 1977 Annual meet - August 13 - 14 at the Seneca County Fairgrounds in Tiffin, Ohio. We know that a lot of those in attendance last year are planning to be there again this year and just needed to know the date. We know the '76 annual meet was an improvement over the first year we met there so the '77 meet should be even as good or better than last year. After the wild winter we had in there here parts (Tiffin and Findlay) we should have good prospects for a delightful weekend at the fairgrounds - all sunshine and no rain.

The flea market proposes to be outstanding this year as it was last year. The Fly In breakfast held at the Airport last year plans to work with us through the Tiffin Lions Club so the prospects for this year look very good. The Ladies Auxiliary had a good year last year with their items for sale and coffee on the grounds. We have not yet heard but we're sure the Auxiliary will be ready for another Annual Meet with a lot of goodies.

R20

A black and white illustration of four children in Native American costumes. From left to right: a boy in a rabbit costume, a girl in a Native American dress and headband, a boy in a large feathered headdress, and a girl in a Native American dress. They are standing in front of a teepee and a smiling sun.

OGELSBY 313-759-1080 or PEARCE 313-628-3589



Bob Speck of Valparaiso, Indiana sent the pictures on this page as a result of our article in the last issue on railroading. A long time member of the Four Club joining shortly after the charter membership closed, Bob has provided many of the members with the "exact" decals they wanted to make their bikes look like new. Although the pictures are not exactly fours Bob owns a beautiful white four and from the below picture he also has a Thor single. If our memory serves us right



from the Indian History, Aurora Motors made the engines for the Indian singles and twins until 1912. Aurora also built their own brand of cycles which was called the Thor. (could be wrong about this). The company is located at Aurora Illinois. Also, if our memory serves us right, a washing machine known as the Thor was sold in the midwest and built by Aurora. The color photo of this single shows a very beautiful restoration by Bob, a machine to be proud of. If I am incorrect will someone please correct us.

Many of you know that Bob is a retired railroader having worked for the Rock Island lines for 50 years till his retirement. Generally, people retiring, want to do something less strenuous in their retirement years and forget the old grind. But not a railroader. Bob loves to reminisce about those days and his love for the steamers. The picture below is a rare beauty for the miniture live steamer is a beauty of perfection. of course! the gentleman seated on the tender is Bob Speck and the gentleman standing is the owner of the acres of narrow gauge layout. I would surely like to see this layout and get a good look and closeup pictures of this fine engine. Thanks a million to Bob for sharing this material with us. We wrote Bob for more info on the location.



A life and death problem has been created by the rapid expansion and use of the motorcycle—more frequent collisions between autos and cycles.

Registration of motorcycles in the Carolinas have more than doubled in the last five years and the death rate of motorcyclists has climbed accordingly. In 1974, North Carolina registered 117,014; South Carolina, 22,658. Death toll in North Carolina was 43; in South Carolina, 60.

In the collision between cars and cycles, the car driver usually comes out better physically, but worse financially because it has been found that the car driver is more often legally at fault.

In the Carolinas it has been shown that approximately 54 percent of the motorcycle fatal accidents involved another vehicle, and national figures that almost 70 percent of all cycle accidents are collisions with other vehicles.

It is believed by traffic safety authorities that the motorist's eyes have been trained by years of driving to recognize other cars, trucks, and even pedestrians. Until he retraining his eyes—in other words becomes aware of the motorcycle—the accidents will continue.

The significance of this is borne out by a recent estimate that by next year one out of seven American households will own a motorcycle.

It is not to be imagined, of course, that the cyclist is never at fault; this judgment is fallible. Allowance, too, has to be made for the beginner.

The motorist can make a major contribution to improving the situation by increased awareness, say traffic safety authorities, and this is not merely retraining the eye. There is also the lack of knowledge or judgment about the mechanical capabilities of the motorcycle or the physical limitations of the rider. Because of a lack of knowledge about the motorcycle or an inability to judge speed or distance, the driver may commit himself to a potentially hazardous situation.

It is felt a third factor is that many drivers are unable to see the motorcyclist emotionally as another decent human being. He may classify all cyclists as hairy, hostile "Hell's Angels" types riding machines that generate an ear-splitting roar instead of the kid next door out for the enjoyment and thrill of riding a cycle.

This, authorities contend, may lead many motorists to do dangerous and discourteous acts that can lead to a serious accident.

Four of the most common types of accidents are seen on this page. Turning in front of an oncoming cyclist and pulling away from a stop sign into the path of the cyclist are the two most likely to cause fatalities, while cutting a motorcycle off at a corner with a right turn or backing out of a driveway into a cyclist's path are most apt to cause injuries.

The motorcyclist is on the end of a great deal of safety informational material being provided by such organizations as the National Safety Council, the Motorcycle Council Safety and Education Foundation, and the American Motorcycle Association.

He is being told: "Imagine that you're invisible," and he will be doing his best to cut the odds, but we motorists must help, and awareness is the key to safety.

Following is a collection of questions, answers, and tips that every car driver should know if he is to avoid a cycle accident.

1. How much space is a cyclist entitled to?

A. A full lane just like a car.

TIP: Give the cycle a full lane like you do any four wheeled vehicle.

2. What is a good rule for judging your following distance?

A. The three second rule.

TIP: Look ahead for a highway marker, mailbox, tree, bridge, or other stationary object. Note the instant the cyclist passes it. Then count—one thousand one, one thousand two, one thousand three. If you get to the marker before you say "one thousand three" you're following too closely. Drop back. The three second rule is for ideal conditions. Add extra seconds to the rule for adverse driving conditions.

3. CAN a motorcycle stop as quickly as a car?

A. A motorcycle, being a lighter vehicle, has the capability to stop in a shorter distance, unless it is on a wet or slippery road surface. Then the braking distance may grow to three times as long because of minimum tire-road contact.

TIP: Use the 3 Second Rule when following a cycle. (Also refer to preceding question.)

4. What are some other hazards to cyclists that auto drivers must recognize?

A. Gravel, sand, leaves, twigs, water and oil on the pavement. Also, manhole covers, rumble strips, and painted lines may

make the cyclist lose control. TIP: Recognize when any of the above conditions exist and be prepared to give him more room and slow down.

5. Do cyclists drive down the middle of a traffic lane?

A. They avoid it as it is particularly slippery because of oil from other vehicles.

TIP: Be alert for the cyclist on the outer edge of a traffic lane; you now know why he is there.

6. How does a cyclist prepare to cross railroad tracks?

A. The cyclist should maneuver to cross the tracks at right angles.

TIP: Recognize the added hazard of the railroad track and give him more room by reducing speed (do not pass within 100 feet of railroad tracks).

7. Are there clues for recognizing the beginning cyclist?

A. 1. His vehicle wobbles.

2. His cycle jerks as he misses proper gear changes.

3. He hesitates in making traffic decisions.

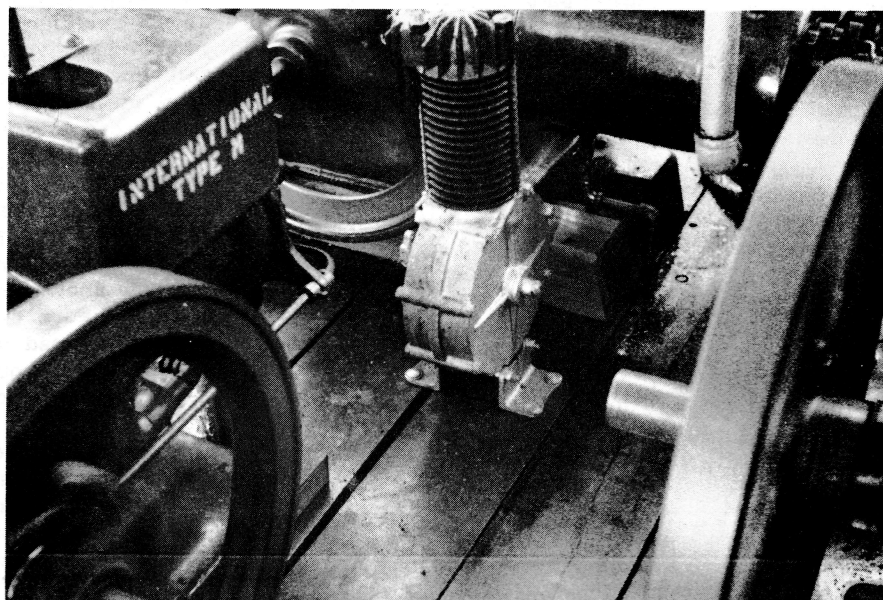
TIP: Give the beginning cyclist time, room and be prepared to stop.

8. Is it difficult to judge how far a cycle is from you?

A. The cycle's smaller size makes it appear further away and to be moving slower.

A little one lunger isolated between 3 big fly wheels, all firing away on display at a Steam Show this past summer. An early Indian single with name on the case, Hendee Mfg. Co., the original home of the Indian Company at Springfield, Mass.. This is one of those little singles that was tucked in a bicycle frame and the power transmitted to the rear wheel by chain. The little single is the air-cooled variety whereas the three flywheelers are water cooled. The craze to locate and restore these old flywheel engines is as great as Indian Fours. This show was held in the City Park of West Liberty, Ohio south of Bellefontaine, Ohio. Although it is advertized as a Steam Show, the owners of the small variety have been invited in and really makes a big show. Some of those old engines are in better shape than when new, just as some of the fours are restored better than factory built.

Many of you have seen the 1905 single that the late John Wickham owned and now owned by Paul Pearce of Oxford, Michigan. This is about the same model. We can't say if this engine is for sale for we did not meet the owner. If anyone is interested contact the editor and we'll put you in touch.



Letters from our readers often have good suggestions or some especially good idea to display the four where the public can see it. Our friend John Yaros of Monroe, Conn. sent us a Christmas greeting and a letter telling about his trophy winning Indian four. John rides frequently during the summer in the area where he lives but winter sort of puts the damper on most riding. A local Motorcycle Dealer in Monroe offered John the chance to put his four and trophy and, his Henderson on display in his showroom. John says it is a chance to share his prize bikes with the public plus its warm in there and better for the machines. We realize there would be some risk involved in such a display but risk is involved even when the bikes are locked up in your own garage. We know that some of those beauties that we see at the annual meets are taken home, covered with plastic and set back in the corner where even the owner can't see it. He just "knows" she's there.

One of our former members who owned a Motorcycle Shop kept his four in his show window. Due to the need for space to display new models he advertized the four for sale in the Indian Four News. John Yaros seems to have confidence in his Dealer friend, confident that the building is safe, and even more confident the public shares his enthusiasm and appreciation for a grand old bike.

USEFUL INFORMATION

In the Fall issue of the Four News we printed factory specifications for checking piston rings, the cylinder walls and the installation of new rings. This material was sent to us by Whitey Metzger along with other pages of a booklet called - A B C of the Motorcycle by W.J.Jackson M.E. 1912, Courtesy George Z. Miller. The Fall issue was full up to the 4 ounce mailing rate so we left out the extra pages and the mailing list.

By today's standards some of the booklet is out of date and processes improved but the old bikes were probably cared for by many of the suggestions. The page on piston rings is by Perfect Circle Company and is still very much the rule for today in the careful installation of rings.

We also mention here that occasionally we have a request for the Overhaul Manual which was reprinted from the original Indian Manual and reduced to an 8 1/2 X 5 1/2 booklet. If you are interested in this reprint please mail \$2.50 to the Editor, name and address in front of magazine on contents page and we'll mail you a copy.

Our appreciation to Whitey for this material.

CHAPTER XIX.

SOME THINGS WORTH KNOWING.

There is a limit to the carrying capacity of a motorcycle, hence it is impossible for a rider to have with him at all times everything for which he may on various occasions have use. There are some things, however, which he cannot very well get along without. Among these are:

- Light monkey wrench and spanner.
- Combination pliers.
- Screwdriver and flat file.
- Three spark plugs.
- Tire repair outfit.
- Spare valves.
- Spare links (if chain is used).
- Belt punch and fasteners.
- Insulated tape.
- Supply of insulated wire.
- Oil can (filled).
- Lock and chain.

This list may sound formidable, but it really occupies comparatively little space, and may be conveniently carried in a case strapped to some part of the frame.

Protection Against Thieves.

Should you have occasion to leave your machine unprotected by the roadside and have no lock and chain with you, take out the switch plug. This will prevent some chance stroller from riding off on it—unless he happens to have a spare plug in his pocket. The best way is to lock the rear wheel to the frame and also take out the switch plug. This gives a double protection.

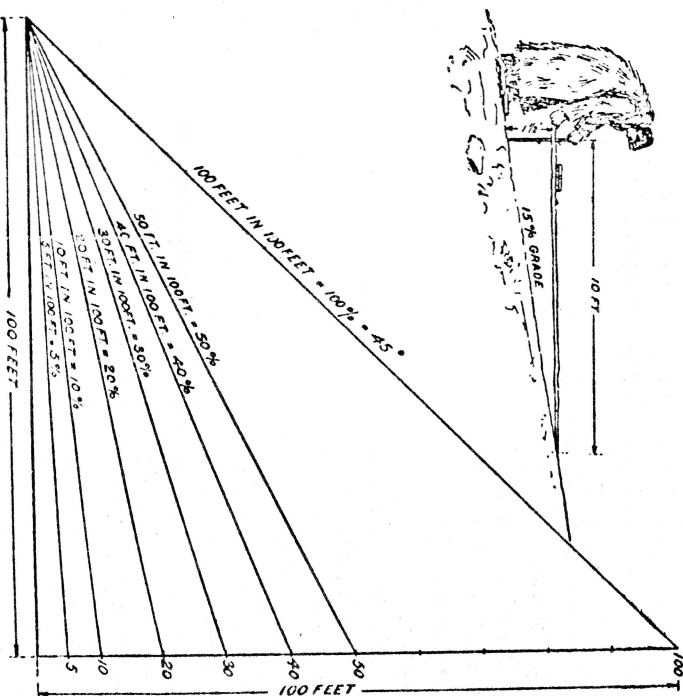
Engine Testing Speeds.

When running your engine "on the stand" for tuning up, or testing purposes, don't let it race. Overspeeding is not only destructive to the motor, but makes it difficult to distinguish the very faults you are looking for. If there is erratic firing, for instance, it is hard to distinguish it if the engine is running at its limit as the explosions occur so closely together that an occasional misfire or pre-ignition might easily be overlooked. The best way is to retard the spark fully, then after a careful test at low speed, about one minute high speed should be all that is necessary. Care exercised in this direction will prevent many a road breakdown.

Keep Your Machine Clean.

Your machine will last much longer if you take decent care of it. When a railway engine comes in from a run "hostlers" take it in hand and give it a careful cleaning, while mechanics look over the mechanism to see that it is in working order before the engine goes out again. This is done because it pays in lengthening the life of the engine, and is also a safeguard against accidents. A motorcycle costs money—from \$200 to \$350, according to the number of cylinders, etc. Why not take decent care of it? The machine should have proper housing, and should be cleaned as soon as convenient after every trip, before moisture and mud have a chance to begin rust and other damages. Clean the cylinders occasionally with a charge of kerosene as explained in the chapter on pre-ignition. Keep the frame, wheels, and all exterior parts well wiped, and go over them once in awhile, say once a week, in a hunt for loose nuts and weak connections, and tighten them. If you use a chain drive, the gummed oil or grease may be removed by soaking the chain in kerosene. If you lay up your car for the winter it will

pay you to take off the wheels and store them away in a moderately cool, dry place, safe from oil or water or acid. Preservation of the rubber tires will be further insured if the wheels are enclosed in a heavy green cloth covering, or placed flat in a well covered box, in the center of which is a saucer of turpentine. The fumes of the turpentine prevent oxidation of the rubber.



Handy Method of Measuring Grades.

Measuring Grades Without Instruments.

There are times when it is a matter of great satisfaction to know the exact grade percentage of a hill. This frequently happens on club or party runs when discussion arises as to the "steepness" of some rise which has been

climbed. As it is not the practice of motorcyclists to carry gradometers, it is usually impossible to settle the question satisfactorily. And yet there is an easy method of doing so. It is as follows:

Take a straight rod or flat stick and measure on it ten feet, making a plain mark at the exact point. Place one end of this stick on the rising ground, and hold up the other, at the 10 foot mark, as shown in the illustration here given so that it is practically level. To ascertain this level take a white or transparent glass bottle of any kind and fill it with water. There will be a little air space left which will manifest itself in the form of a bubble. Cork the bottle and lay it flatways on the stick. When a level has been reached the bubble will work its way along the top of the water to the center of the bottle. Having secured the level take the measurement of the distance from the stick to the ground at the end you are holding. Then multiply this measurement by 10 and you have a reasonably fair estimate of the grade. In the illustration, for instance, the distance from the ground to the stick is 18 inches. This multiplied by 10 gives 15 as the grade percentage, being ten times a foot and a half, or fifteen feet in the hundred.

Why Multiple "10" Is Used.

The reason for multiplying by 10 is that it is necessary to get the rise per 100 feet. As your stick, for convenience in handling, is only 10 feet long, the multiple 10 must be employed in order to get the grade, which, as explained further on, is always computed on the 100-foot basis.

It is peculiar fact that few people understand the real method of determining grades. As a rule they confuse angles with the percent of grades when in reality they are two radically different quantities. Thus a rise of 100 feet in 100 feet gives a percentage grade of 100, but the angle

is one of 45 degrees. A glance at the illustration given will demonstrate this clearly. In referring to the inclination, the rise or fall, of a road surface, engineers invariably use the term "grade of — percent." They refer to a hill, for instance, as being of 5, 10, 15, 20 percent grade. This means that there is a vertical rise or fall of that number of feet to the 100 feet. In ascertaining this grade the engineer, by means of his instruments, measures off an exact 100 feet in a horizontal direction, regardless of the rise of the hill. He next measures off the exact height at the end of the 100 foot horizontal line, and the difference between this and "zero" or nothing at the starting point gives him the percentage of grade. Thus if the ground 100 feet from the starting point is 5 feet higher, the grade is a 5 percent one, and so on. While apparently an intricate one, the calculation is readily made by a process known to engineers as triangulation.

The next time you are on a motorcycle trip, and get into an argument with a brother rider over the grade of some hill you have climbed use the simple method first described and settle the controversy to the satisfaction of yourself and your companion.

Handy Shelter for Motorcycle.

Motorcycle owners, especially those who live in flats and lack proper housing or storage facilities for their machines, will find a valuable suggestion in the following:

Procure a large, heavy packing box of the proper dimensions. This should be not less than $4\frac{1}{2}$ feet in height, $7\frac{1}{2}$ feet in length, and $2\frac{1}{2}$ feet wide. A box of this size and of good heavy material may usually be had for about \$1.25. Take off one end and hinge it on to the box. Place the box so the hinged part of the end will be on the ground. This hinged end constitutes the door

which, when open lies flat on the ground. Put a couple of layers of heavy roofing paper between the box and the ground. Then cover the top and the four sides with a layer of the same material. This makes it dry and damp proof. Add a hasp and padlock at the top of the cover and you have protection against prowling motorcycle thieves. When you wish to use the box open the door by laying it flat on the ground, and the machine may be readily pushed into, or pulled out of the box over it. This makes a cheap, handy and storm-proof housing.

Weight-Carrying Power of Tires.

Following is a handy table which gives the weight which may be carried on pneumatic-tired wheels according to the diameter of the tire and the air pressure at which it is inflated.

Diameter of Tire, Inches.	Maximum Weight on Wheels in Pounds.	Air Pressure Sq. Inches.
2½	225	50
3	350	60
3½	600	70
4	750	80
4½	1,000	90
5	1,000	90

HOW A NEGLECTED TIRE GROWS WORSE.



The First Break.



It's Growing Larger.

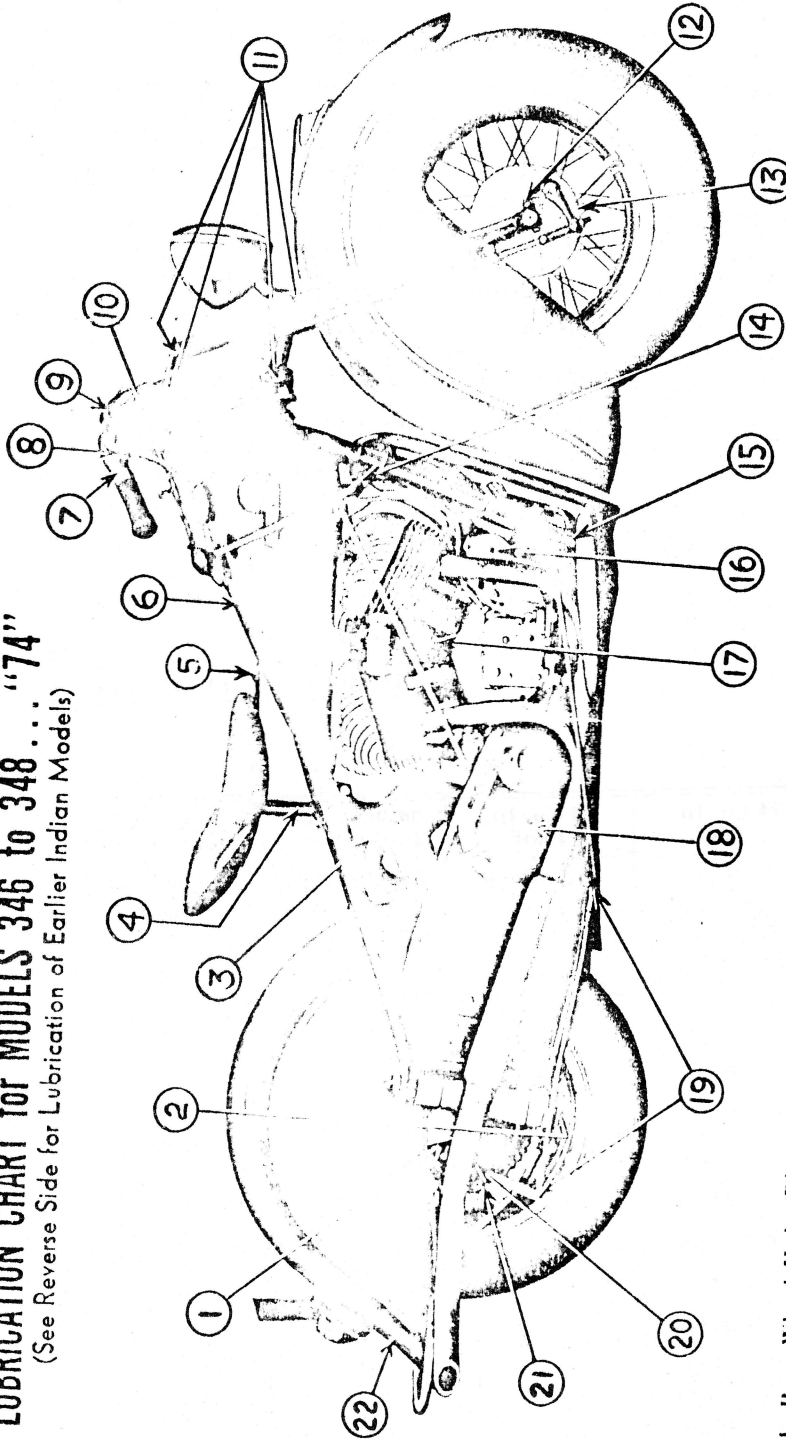


Bad Sand Pocket.



Gone Beyond Repair.

LUBRICATION CHART for MODELS 346 to 348.... "74" (See Reverse Side for Lubrication of Earlier Indian Models)



1. Rear Wheel Hub—Disassemble; clean and pack ball and roller bearings with fresh high melting point grease every 6000 miles—348—Grease every 1000 miles.
2. Spring Frame Units—Grease every 1000 miles.
3. Generator—Few drops of light oil at oilers at each end of generator every 1500 miles—See Care of Generator.
4. Seat Post—Grease every 1000 miles.
5. Saddle Front Connection Bearing—Grease every 1000 miles.
6. Air Cleaner Element—(Air cleaner on left side on carburetor)—Remove element, dip clean in gasoline and allow to dry. Dip in 10W engine oil and allow to drain—reinstall. Service every month or 1000 miles for normal use; oftener if motorcycle is operated in extreme climates or under conditions of extreme dirt.
7. Handlebar Control Grips—Unscrew protector sleeves and apply a few drops of light oil every 1000 miles.
8. Hand Brake Lever and Cable—Oil hand brake lever pivot every 1000 miles.
9. Controls—Apply few drops of light oil at upper ends inside covering once each week.
10. Upper and Lower Head Bearings—Disassemble, clean and pack with fresh high melting point grease every 10,000 miles.
11. Fork Shackle—Clean and pack with fresh grease every 6000 miles. 348—Grease every 1000 miles.
12. Front Wheel Hub—Requirements same as for Item No. 1—Rear Wheel Hub.
13. Front Brake Cam Needle Bearing—Clean and pack with fresh grease every 6000 miles.
14. Shift Lever—Oil every 1000 miles.
15. Brake and Clutch Pedals—(Clutch pedal on left side)—Grease every 1000 miles.
16. Magneto—See care of Magneto.
17. Distributor—(Battery ignition models)—Grease lightly every 1000 miles.
18. Kickstarter Segment Bearing—Grease every 1000 miles.
19. Brake and Clutch Rod Clevises—(Clutch rod on left side)—Apply a few drops of oil to front and rear clevis pins every 1000 miles.
20. Rear Brake Cam Bearing—Grease every 1000 miles.
21. Chain—See Care and Adjustment of Chain.
22. Speedometer Rear Drive—(Left side at rear wheel)—Grease sparingly every 1000 miles.
23. (Not shown). Model 348, speedometer front drive, lubricator in drive unit mounted on top of front brake plate. Grease every 1000 miles.

Motor and Serial Numbers of the Various Seasonal Models from 1933 to Date

	45 Cu. In. Scout	74 Cu. In. Chief	78 Cu. In. Four	30.50 Cu. In. Junior Scout	45 Cu. In. Sport Scout
1933 Motor No.	BCC-101-up	CCC101-up	DCC101-up	ECC101-up	FCC101-up
1933 Serial No.	233-101-up	333-101-up	433-101-up	533-101-up	633-101-up
1934 Motor No.	BCD101-up	CCD101-up	DCD101-up	ECD101-up	FCD101-up
1934 Serial No.	234-101-up	334-101-up	434-101-up	534-101-up	634-101-up
1935 Motor No.	BCE101-up	CCE101-up	DCE101-up	ECE101-up	FCE101-up
1935 Serial No.	235-101-up	335-101-up	435-101-up	535-101-up	635-101-up
1936 Motor No.	BCF101-up	CCF101-up	DCF101-up	ECF101-up	FCF101-up
1936 Serial No.	236-101-up	336-101-up	436-101-up	536-101-up	636-101-up
1937 Motor No.	BGG101-up	CCG101-up	DCG101-up	ECC101-up	FCG101-up
1937 Serial No.	237-101-up	337-101-up	437-101-up	537-101-up	637-101-up
1938 Motor No.		CCH101-up	DCH101-up	ECH101-up	FCH101-up
1938 Serial No.		338-101-up	438-101-up	538-101-up	638-101-up
1939 Motor No.		CCI-101-up	DCI-101-up	ECI-101-up	FCI-101-up
1939 Serial No.		339-101-up	439-101-up	539-101-up	639-101-up
1940 Motor No.		CDO-101-up	DDO-101-up	EDO-101-up	FDO-101-up
1940 Serial No.		340-101-up	440-101-up	540-101-up	640-101-up
1941 Motor No.		CDA-101-up	DDA-101-up	EDA-101-up	FDA-101-up

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INDIAN INSTRUCTION BOOK

	45 Cu. In. Scout	74 Cu. In. Chief	78 Cu. In. Four	30.50 Cu. In. Junior Scout	45 Cu. In. Sport Scout
1941 Serial No.		341-101-up	441-101-up	541-101-up	641-101-up
1942 Motor No.		CDB101-up			FDB101-up
1942 Serial No.		342-101-up			642-101-up

No Civilian Production During the Year 1943

1944 Motor No.		CDD-101-up			
1944 Serial No.		344-101-up			
1945 Motor No.		CDE-101-up			
1945 Serial No.		345-101-up			
1946 Motor No.		CDF-101-up			
1946 Serial No.		346-101-up			
1947 Motor No.		CDG-101-up			
1947 Serial No.		347-101-up			
1948 Motor No.		CDH-101-up			
1948 Serial No.		348-101-up			

Motor and Serial Numbers of Indian Military Models

	45 Cu. In. Scout	74 Cu. In. Chief	30.50 Cu. In. Lightweight	45 Cu. In. Shaft Drive
Motor No.	FDO-101-up	CDO-101-up	GDA-101-up	HDA-101-up
Serial No.	640-101-up	340-101-up	741-101-up	841-101-up

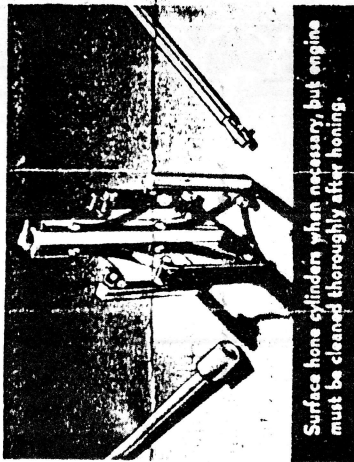
Page 41

PREPARATION OF PISTONS AND RODS

1. Clean piston and rod assemblies in a good liquid cleaning solution, or by an approved blast cleaning method.
2. Clean all ring grooves thoroughly by removing the carbon and gum deposits with the sharpened end of a piece of broken ring or with a good ring groove cleaner. Clean the drain holes or slots in the oil ring grooves.
3. Inspect the piston for broken lands, cracks and collapsed skirts. Collapsed pistons should be replaced or expanded by an approved method.
4. Check fit of piston pins and align connecting rods.

PREPARATION OF CYLINDERS

When cylinder walls are scuffed or scratched, a surface hone (Figure 3) may be passed through the cylinders before installing rings. This should be done **ONLY** if cylinder bores are thoroughly cleaned of abrasives with light engine oil and clean rags after honing. **FAILURE TO THOROUGHLY CLEAN THE CYLINDERS WILL RESULT IN EARLY ENGINE FAILURE. DO NOT** clean with gasoline or a solvent.



1 PREPARE REST OF ENGINE

1. Clean all internal parts thoroughly. Use a good liquid cleaning solution and brush to remove all dirt, sludge, and cuttings. Be sure to clean carbon and gasket adhesions from the engine head. The oil pan, oil pump, and oil pump intake screen must be thoroughly cleaned.
2. Clean and re-oil the air cleaner, and clean the crankcase breather.
3. Service the manifold heat control valve and the automatic choke mechanisms.
4. Clean the cooling system thoroughly to avoid overheating. Use a good reverse flushing apparatus.

CHECK MAIN AND ROD BEARINGS

Excessive main, rod, and camshaft bearing clearances will result in increased oil throw-off from these bearings, and make it difficult for any ring combination to satisfactorily control oil. Main and connecting rod bearing clearances should be checked with Plastigage and corrected to manufacturers specifications. Use a torque wrench to tighten cap screws and rod bolts to recommended tensions.

CHECK VALVE SYSTEM

Grind valves if necessary. Since no piston ring set can prevent oil from passing the valves, the clearance between the valve stems and guides should be checked. In engines with replaceable valve guides, install new valve guides and valves as necessary. In engines with integral valve guides, ream valve guides and install new valves with oversize diameter stems. New valve stem oil seals should also be installed on engines that are equipped with them.

INSTALL RINGS ON PISTON CAREFULLY

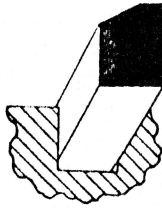
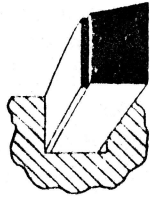
Use a Perfect Circle ring tool (Figure 4) to prevent ring distortion. A new ring permanently distorted is no better than an old ring. Lubricate rings thoroughly with heavy engine oil just before installing piston and ring assembly in cylinder.



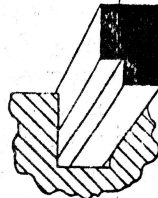
INSTALL RINGS IN GROOVES PROPERLY

This set contains two or more of the following ring types.

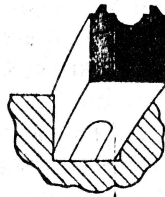
TOP GROOVE SPACERS
If top groove spacers are used, install them above top compression ring.
(Toward top of piston)



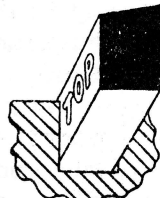
BEVELED CM
Install with beveled edge UP.
(Toward top of piston)



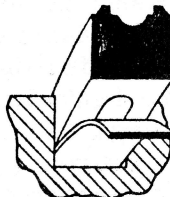
200 CM
Install with INSIDE groove UP.
(Toward top of piston)



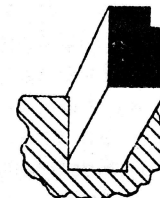
WS 85 OIL



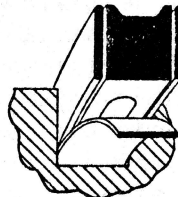
TAPER FACE CM
Install with word "TOP" UP.
(Toward top of piston)



X WS 85 OIL



70 CM
Install with outside groove DOWN.
(Toward skirt of piston)



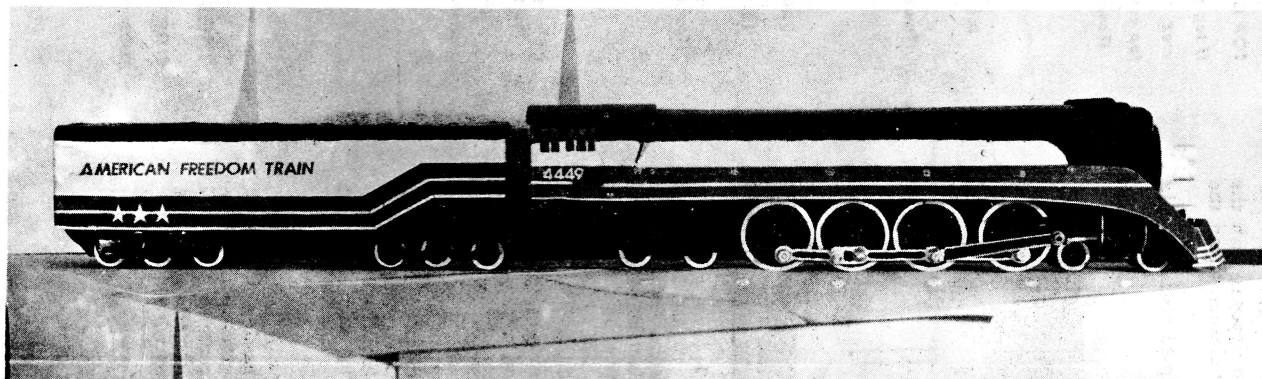
GX OIL
Place expander in ring groove. Install lower steel section, cast iron separator, and then upper steel section.

CAUTION: NEVER install chrome piston rings in chrome plated sleeves or cylinders.

THOROUGHLY LUBRICATE PISTONS AND RINGS. To insure proper initial piston, ring, and cylinder lubrication, the pistons with rings assembled should be immersed in SAE 30 or heavier engine oil before they are installed in the cylinders.

PREVENT CYLINDER DISTORTION. Cylinder distortion is often caused by unequal tightening of cylinder head cap screws or nuts. Always use a **TORQUE WRENCH** and tighten cap screws in proper sequence to recommended tensions.

The American Freedom Train had an unusual year of celebration, touring the country coast to coast, attracting millions to view the exhibits, and especially the three restored steam engines that took to the rails again after nearly 20 years of outside display and storage. Your editor was involved locally in publicity when the former Reading No 2101 now No 1 pulled the Freedom Train from Cincinnati, Ohio to Detroit, Michigan. When the train reached Chicago there was a change of engines and a former Daylight engine that pulled the famous Daylight passenger trains from Los Angeles, California to San Francisco, California, was coupled on and took the train to the west coast. This engine, the 4449 Southern Pacific was painted in very beautiful red, white, and blue striping. I received from former member, Earl Mc Cumber of Ventura, California a Sunday pictorial with some very beautiful pictures of this beautiful engine. The bug began to bite me to start a model of the engine so I drew scale plans and started the model last February. I had a book of engine built by the Lima Locomotive Company of Lima, Ohio that built the 4449. Scaling the best we could from photographs and some vague idea of its size we finished the model about 4 months later. Although it is not powered but just an eye catching model, my wife wanted it for her very own. She has displayed it several places and especially at the Lima Historical Society meeting in which the official photographer for the Freedom Train was lecturing. He was quite delighted to see the model and we now correspond with him. We have printed below a picture of the model in black and white. It is 42 inches in length, 5 inches wide and 6 inches high. It is one of the highest engines built by the Lima Company being 11 - 6 over the smoke deflectors. It was so high it could not negotiate some of the tunnels in the Alleghenies. We had the model at the '76 annual meet and many saw it there.



A Christmas letter from Casper and Inez Barnes of Bradenton, Florida brought us up to date on News from our former Secretary and Treasurer in Florida. His emergency eye surgery has cleared up and he now sees fairly well again, but other surgery in other areas left him rather weak and a long period of convalescence. They were at our home just before the annual meet last year and Casper was just on the recovery road then. He is considerable better but now his wife has had a bout with the Flu bug and a heart condition. After years of service to the Indian Four Club Casper says its good to sit back and let someone else do the work. He and the other Charter members all put a lot of effort into the Club organization to keep her going. Today their dream and efforts have paid great dividends for the club of over 300 members is an International Club. I am sure the other members will say with me - thanks a lot Casper, your efforts have not been in vain.

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NEW ZEALAND

Tim Thomson P O Box 7 Clydesdale So. Otago New Zealand

Request for Roster of Henderson Machines

Mr. Cliff Pease of Virginia Beach, Virginia requested that we print in the Winter Issue of the Four News a request for owners of Henderson Cycles fill out a small questionnaire to compile of all known Henderson Motorcycles. As the list grows it will be published in the Antique Motorcycle Magazine and the Indian Four News.

Although the Henderson machines make the owner eligible for membership in the Indian Four Club we believe singling out the owners of the Henderson machines is a fine idea to know how many of these fabulous machines that were the forerunner of the fabulous Indian Four, are still in existence, restored or unrestored.

So you Henderson owners wherever you are - write to Cliff Pease at Virginia Beach, Virginia and give him the following information for his list of Henderson bikes

Model designation

Engine Number

Year of Manufacture

Henderson parts for sale or trade (yes or no)

Owner's name and address

Send this information to Cliff Pease - 4164 Ewell Rd - Virginia Beach, Virginia 23455

Our thanks to Cliff for asking us to cooperate in this survey and printing the list in the Four News.

ADS

Wanted - Indian Parts

1941 horn - tool box

chain guard - handle bars

side car running lite with small red lens on top

head lite backing plate (bulb type)

right hand brake lever (S-Type)

Indian three wheeler rear frame section and rear end

Indian police siren - also pins, cans, mags, etc.

Will take parts in rough condition.

Write - Robert Lamb

1505 Bradford

Grand Rapids, Michigan 49503

Phone 616-459-6038

1

Indian Motorcycles

A list of 30 dealers, parts and supplies for 1 - 2 - 4 cylinder machines, also 3 clubs.

Send \$1.00 and self addressed envelope to INDIANS

Box 8084

Kentwood, Michigan 49508

1

For Sale - 1958 Zundapp

4000 miles, good shape

Write - Frank J. Simon

2019 Elyeria St.

Findlay, Ohio 45840

1

PARTS FOR SALE BY
KEN YOUNG AND SON
622 E Hill St
Long Beach, Calif. 90806

Main and Transmission bearings
with spacers.
Cluster and Slider gears
Oil Pump Gears (late model only)
Pistons (T - slot .030, .040, .060 and
.1250 fit with .010 wrist pins.
Clutch release shaft
Thrust Bearings
Gasket sets
Valve adjustment screws (for later model
lifters)
Push rods '36 - '42 (not for '36 - '37
ball type rocker)
Head bolts and washers
Cylinder base nuts
1/4 / 28 X 3/8 nuts for pan and exhaust
manifold.
Valve collars for taper keepers
Fiber disc for magneto drive

All Parts Are New Remanufacture

1

For Sale - 1940 Indian Chief
restored, in excellent condition.
firm \$1800.
Write - Gerald R Bevard, 2930 Hoffman
2 Mill Rd., Hampstead Md. 21074

Wanted - Indian four or Henderson
Write Lee Gresk, 30 3rd St., Suffield,
Connecticut 06078

2

For Sale - 1939 (DC 1139) Indian Four
3638 miles since restoration
\$2900 cash
Might take good Triumph as part
payment
Write - Allen D Fowler
4615 Varsity St
Ventura, Calif. 93003
Phone 805-642-2775

2

Wanted - Complete engine and
Transmission for 1941 Indian Four
Also seat, bearings, washers and
nut for fork. The parts must be
in usable condition. Please state
condition and price
Write - Russell Dilday
Box 398
Tuckerman, Arkansas 72473
Phone (501) 349-2725

1

For Sale - 1937 Indian Sport Scout
Disassembled with all metal sand-
blasted and primed. Engine clean
and rebuilt. All sheet metal in
excellent shape. Set of diamond
tread tires. Has original Indian
dash with Indian script ammeter.
\$650
Write Steve Rauch, R D 2 Box 484,
Fulton, New York 13069
Call collect 315-598-1776

1

Wanted - Buddy seat or original
seat for Indian four. Will pay cash
or swap motorcycle parts.
Wanted - Model 841 Shaft Drive Indian,
or X A Harley.
My stable of machines includes
1918 single Harley
1921 flat twin Harley
1929 dirt track 1200cc Harley
1940 10/12 Harley
1960 KR Harley
1931 V4 Matchless
1936 B M W
1950 Vincent Rapide
1922 Cleveland single
some motorcycle parts
Tim Thomason, P O Box 7, Clydevale,
South Otago, New Zealand

2

For Sale - 1947 Chief 74
Top condition - saddle bags, luggage
carrier.
Owner Nick Gansinger
Write - Don Knapko
31027 Elmwood
Garden City, Michigan 48135
Phone 1-313-522-2356

3

Wanted - information leading to the purchase of "Fallon Brown" DuPont delux enamel, used on 1940 Indians. Someone reading this ad must have a sample of this paint or the DuPont number. If you do, please write to the address at end of this ad.

Need the following parts to complete the restoration of my 1940 four.

75594 - Jiffy stand leg
42795 - (2-each) lower clip
42796 - Box upper support for frame mounted tool box
75609 - Tool roll up (for individual tools)
35H9X - Horn (Indian face)
42665 - Rubber tube for speedo. cable
25B242 - Wire clip for 1" tube, large loop
2 - 400 X 18 inner tubes w/double diameter brass stems
Indian four A, B, or C, spark plugs
Write - John Dohnal
9437 Burlington
3 Brookfield, Illinois 60513

For Sale - 1935 Indian four basket case - \$1200.

1937 Indian Standard Scout - 95% restored - \$2000

BRAND NEW INDIAN FOUR ENGINE - assembled from 90% new parts - \$3000

New parts Reproduced Tool boxes for rigid frame Indian fours 1929 - 1939.
Tool boxes for 101 Scout and rigid frame Chief.
Chain guards for 1929 to 1939 Indian four.
1934 and earlier tail light brackets and cups.
101 exhaust pipes and muffler.
Bullet headlights are still being worked on and should be available in the spring.

Send SSAE with enquiry to Earl Chalfant, RD 1, Brookville, Pennsylvania. 15825
Phone 814-849-7418

Paulette Manufactures the Following

For all makes and models of Indian of Indian Four Cylinders. If, what you need is not listed, he will make it on special order.

Brake pedal's - brake rods
clutch pedals - clutch rods
shifter rods
tail pipes - muffler & tail pipes
manifold guards - chain guards
tool boxes - battery cradles
ammeters - oil gauges

These and other special parts are made to specifications from original Indian factory blue prints. Drill rod is used for all brake, clutch and shifter rods. All parts are tempered at stress points.

Specializing in rebuilding the complete engine - pouring main bearings - rebuilding rods - semi dry clutch.

Send list of your needs for quote. Information gladly given to help you restore your four to original.
Write - R.W. Paulette, P O Box 401
Midway, Kentucky 40347

DECALS DECALS DECALS DECALS

We have the FINEST Decals for cycles from 1907 to 1939. Most decals \$5.50 a pair, plus 50 cents for postage and handling. Please send self addressed stamped envelope for inquiries. Money orders only for decals. Our decals are the finest.
Bob Speck - The Decal Man.
Mtd Rt. #35, Box 338, Valpariso, Ind. 46383

DECALS DECALS DECALS DECALS

For Sale or Trade - I have many motorcycles among my possessions and must thin down my flock. What do you have in cash or trade for any or all of the following?

1949 Harley 45 cu in solo - good
1953 B M W 650 CC - Fair
1963 Honda 305 cc - Excellent
1967 Marusha 650 cc opposed - Excellent
1967 Zundap 250 cc 2 stroke - Good
1953 Indian Chief - Good
1941 Indian Scout - Dissembled
1961 Harley 74 - Excellent
1972 Harley 74 - Excellent
1941 Indian Shaft Drive - Excellent
1941 Indian four - Good
1952 Indian Chief - Excellent
1931 Indian 101 Scout - Excellent
1931 Harley 74 - Fair
1944 Indian Chief - Stripped
1969 Yamaha 300cc 2 stroke - Excellent
1940 Indian four - Dissembled

These are all in various states of repair and condition. Most are running bikes with antique tags. Some of course are favorites. If interested, get in touch with Whitey Metzger

2174 Winthrop Rd
Huntingdon Valley, Penna. 19006
Phone 215-WL-7-0843

Will provide transportation within limits as I have a road worthy van.
Note - most interested in selling outright

2

For Sale - 1 set of flat Indian Chief spot lights - \$150

Write - Ed Wolski

16514 Toepfer Rd
E Detroit, Michigan 48021

3

Wanted - 1930 - '35 Indian four to restore. Would appreciate photo of machine you wish to sell.

Write - Benito Battilani

via Paolo Galeati 45
I-40026 Imola, Italy

3

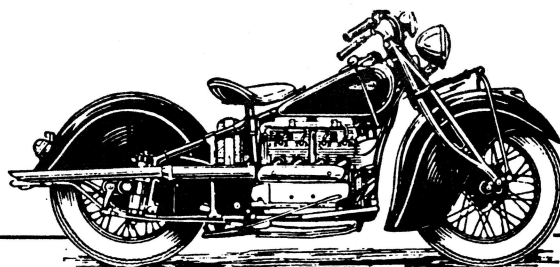
TO WHOM DOES THIS PICTURE BELONG

We received an 8 X 10 color print some time ago of the picture printed below and no identification was included.

Would the owner or someone acquainted with the owner please contact us and let know so we can return it. It is in a plastic holder and must be a part of a large album. We have received many small snap shots of various members which are placed in the Club Library but we felt this picture should be returned.

Editor





The Indian Four Cylinder Motorcycle Club, Inc. was organized

. . . . to help members and owners of the Indian Four and other American made fours to maintain and restore these famous machines.

. . . . to help as much as possible to locate parts to keep the Indian Four and other American made fours - the Pierce - Henderson - Ace, from becoming obsolete.

. . . . that the Indian Four Cylinder Club shall by no means be exploited in any way or fall into unscrupulous hands to be ruled or run for the benefit of any one individual or group of individuals. It shall remain as was originally organized in purpose for the benefit of owners of the Indian, Pierce, Henderson, or Ace, or such American made four cylinder motorcycles as the members of the Indian Four Cylinder Club deem acceptable in the club.

. . . . to promote good fellowship and trust among members.

. . . . to encourage all members to take active part in helping the club grow.

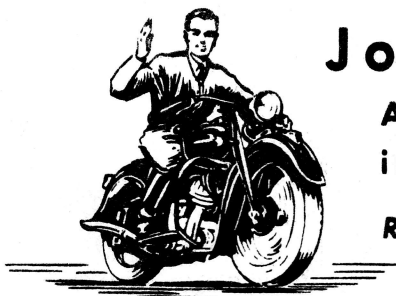
Officers, Indian Four Cylinder Club, Inc.

1976 - 1977

President - - - - -	Herman G. Metzger Jr.
Vice President - - - - -	William E. Newhouse
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INDIAN FOUR CYLINDER NEWS

EDITOR, 1966 - 1967	CECIL HASSER
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Join the fun —

**Attend the next motorcycle activity
in your locality**

RIDE AN *Indian* MOTORCYCLE

