

DATE: July 18, 1972

TO: Racers

FROM: Race Director

SUBJECT: Racing Modifications

1. ENGINE MODIFICATION SPECS FOR SUMMER GRASS RACING

Ports All ports will be measured from the top of the cylinder.

Exhaust Port 29.5 mm

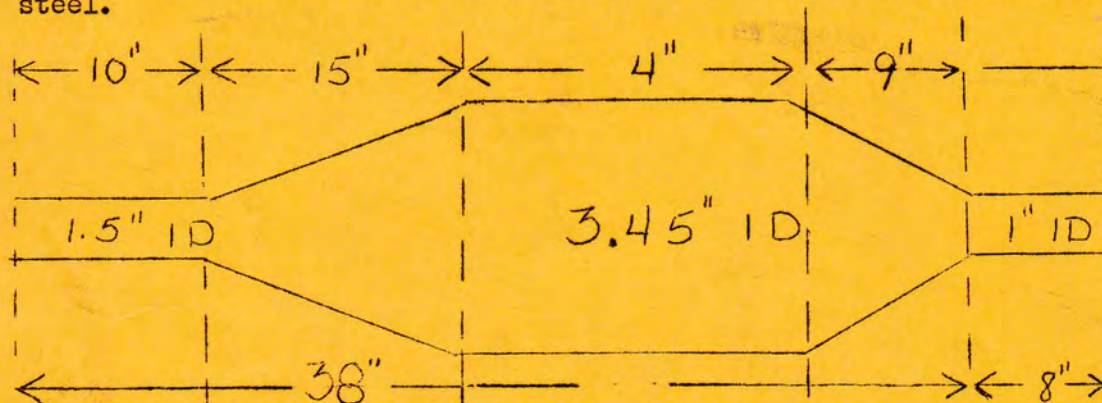
Intake Port 89.5 mm

Radius all edges with file & cloth. Do NOT widen ports.

Heads Measure the volume of the combustion chamber with a buret tube or medical syringe that measures in cc's; use a clear plastic plate over the combustion chamber. The combustion chamber should be 11.2 cc's with the spark plug in place.

11. TUNE PIPE SPECIFICATIONS, AVAILABILITY, AND INTEREST SURVEY.

Exhaust Tuned expansion chambers to be made from 20 ga. cold rolled steel.



Finished pipes will be available from Brutanza. We are at this time trying to determine how many racers will be interested in securing these pipes for, between \$125.00 and \$ 175.00 per set of three, ready to be fitted into the machine. If you are interested, please indicate this to us on the enclosed postage paid card. The same pipes will be applicable to both summer and winter racing.

Marley J. Duro

1973 SET-UP PROCEDURE FOR BRUT SNOWMOBILE

AUGUST 31, 1972

1. Check coolant level. It should be one inch below sealing portion of filler neck.
2. Check hose fittings and cooling extrusions for possible leaks.
3. Check oil level in chaincase. It should show at check plug when removed.
4. Check grease fitting on suspension for presence of special Track and Suspension Lubricants.
5. Suspension springs must be installed. Place one hook of one spring on the 1/2" rear spring mount rod. Place the other hook on the adjustable eye bolt of the front spring mount. Second spring is hooked in at same points as the first, so hook ends of spring lie side by side. When attached, tighten eye bolt so approximately 1 1/2" of thread is exposed past the adjusting nut. This is the correct spring tension for a person weighing approximately 175 lbs.
6. Adjust variable suspension shocks to help reduce severe bottoming. Remove cotter key and tighten with large castellated nut.
7. Check all electrical switches and lights to make sure they are working properly.
8. Check throttle and choke so they are adjusted properly and are not sticking. Adjustments are in owners manual.
9. Check low and high speed fuel needles. High speed needle should be approximately 3/4 turn and low speed needle approximately 1 1/8 turn.
10. Fuel line and fittings should be checked for leaks.
11. Track and suspension must be adjusted. Instructions are in owners manual.
12. Check brake adjustment. Should be approximately 3/4" free travel in lever. Adjusting instructions are in owners manual.
13. Check steering adjustment. It should have approximately 1/4" toe out. Adjusting instructions are in owners manual.
14. Check belt alignment. Should be 5/16" offset. Use Brutanza alignment tool part #23122-10. Instructions are in owners manual.
15. Check for loose bolts and nuts on all parts of the machine.

BRUTANZA ENGINEERING

newsletter

DATE: 9-20-72

TO: ALL DEALERS

FROM: SERVICE MANAGER

SUBJECT: CORRECTION ON 1973 SET-UP PROCEDURE FOR BRUT SNOWMOBILE

ITEM 14 SHOULD READ: BELT ALIGNMENT SHOULD BE 5/16" OFFSET.

THE ALIGNMENT TOOL, PART #23122-10, IS CORRECT.

SINCERELY,

BRUTANZA ENGINEERING, INC.

JAN M. HEDLUND
SERVICE MANAGER

BRUT

newsletter

Bulletin No. 101Date 10-25-72

During last season Brutanza Engineering, Inc. encountered a fatigue problem with the exhaust system installed on the 1972 Model Bruts.

We do have a limited quantity of new 1972 Model Brut machines left in stock which are now being sold. In order to satisfy the Dealer and end consumer, Brutanza Engineering, Inc. will supply with every remaining new 1972 Brut still to be sold, one 1973 Exhaust Muffler.

We ask you as the dealer to install the replacement exhaust system to satisfy the Brut purchaser.

With the special discount price offered on the remaining 1972 Models for a price of \$1,050.00 - resp. \$995.00 and \$975.00 depending upon quantities purchased, we will supply you with the new 1973 muffler free of charge, however Brutanza Engineering, Inc. will not pay the labor allowance for installing same.

We kindly request you to change the mufflers before any machines are delivered to customers. We do not wish to receive complaints from end consumers, that their mufflers on the newly sold 1972 models have failed. Please do co-operate to the fullest, keeping the BRUT image alive.

Please DO NOT keep the muffler as supplied to you for the sole purpose of replacement only, as spare parts stock on your shelves, and consequently sell same to the customer after the original muffler failed.

In order to install the new muffler, a small modification is required.

The genuine 1972 muffler has two exhaust outlets. The 1973 Model replacement muffler has only one exhaust outlet. This requires that one new hole has to be cut into the back wall of the tunnel.

We do recommend to patch up the original outlet holes by means of riveting an aluminum plate over same, preventing the snow from entering into the bulk-head (engine compartment).

A modification "Template" will be supplied by Brutanza along with the replacement muffler.

Jan Hedlund

Jan M. Hedlund
Brutanza Engineering, Inc.
Service Department

The logo consists of the word "BRUT" in a bold, sans-serif font, enclosed within a stylized, elongated oval shape that tapers at both ends.

service bulletin

BULLETIN # 105

DATE October 24, 1972

SUBJECT: Installation of Speedometer Parts

1. Tap the metal speedo slug into the drive shaft hole.
2. Slide the flexible drive extension into the installed slug.
3. Align drive flange over previously installed nuts on bearing flangette.
4. Install three (3) 5/16" coarse thread nuts over speedometer flange.
5. Affix threaded end of speedometer cable to drive unit and tighten securely.
6. Position cable so that it is directed forward in the machine beside the steering arm at end of the bulkhead and follows the hood to the threaded fitting on the speedometer head.
7. Fasten the cable securely to the threaded connection in the head.

Jan M. Hedlund

Jan M. Hedlund ph

BRUTANZA ENGINEERING, INC.
Service Department

BRUTANZA ENGINEERING

service bulletin

BULLETIN # 106

DATE October 24, 1972

SUBJECT: Fuel Filter Hose Clamp Fittings

All machines produced through S/N 276834 were not equipped with hose clamp fittings on the fuel lines at the fuel filter; this connection is not sealing properly. Hose clamps will be supplied for dealer installation on all such machines.

Jan M. Hedlund

Jan M. Hedlund ph

BRUTANZA ENGINEERING, INC.
Service Department

BRUTANZA ENGINEERING

newsletter

DATE: December 19, 1972

TO: All Dealers

FROM: Parts Department

SUBJECT: Gas Line Check Valve Availability

Brutanza Engineering has added another accessory item for Brut owners. Some of the carburetors will not hold gas up in the line causing the driver to pull on the starter to pump the fuel up in the line. We have available now a gas line check valve—Part #18135-10 dealer cost of \$.45. If you have any complaints on the machines being hard to start, it will pay the customer to install one of these inexpensive check valves. It is to be installed on the end of the gas line in the gas tank. To get at this line, use a wire with a hook at the end to hook the line and pull it up thru the top of the gas tank. Remove the nut previously being used to weight the line and install the valve in the gas line.

BRUT

service bulletin

Bulletin #114

GROUP CLAIM #73-1

December 18, 1972

SUBJECT: Clutch Replacement Parts

We have received some clutch parts to improve the performance in the 1973 LC 44 Brut. We know many of you have been waiting for these parts, and we greatly appreciate your patience in this matter.

THE FOLLOWING PROCEDURE WILL BE FOLLOWED IN SUPPLYING THE REPLACEMENT PARTS:

1. The replacement parts for a percentage of your machines will be shipped automatically from the factory. Order the remainder in the usual manner.
2. If you have trouble or need help in installing these parts, your representative will assist you when he calls.
3. The changeover consists of one (1) bushing--part number 21511-10 and four (4) replacement arms--part number 21302-16 (includes four) for the drive clutch; one (1) 5-coil lock spring--part number 21358-10 is to be installed in the driven clutch.
4. All parts will be billed to your account until such time as you return the parts and a warranty claim properly completed, as per Bulletin #113 indicating Group Claim #73-1.

INSTALLATION OF PARTS

1. Installation of the bushing is detailed in service Bulletin #108.
2. Change the arms using the stock clamps that came with the purple arms. Be certain that they are tightened securely. The locks on the bolt heads should be bent over. Before putting the clutch together, make sure the moveable sheave slides free on the shaft. Use original spring, and put back together making sure to line up marks on weight housing. Seat the housing on the shaft all the way. Put in the large assembly nut and torque to 50 ft. lbs. Be certain to lock the tabs properly. Install the clutch on the shaft and torque the clutch bolt in at 35 ft. lbs.

3. Remove the driven clutch from the shaft. Push in the cam slightly, and remove the snap ring. Remove the cam and spring. Install the new spring, cam and snap ring. Tighten spring 1/3 turn. Install the pulley on the shaft making sure to use the key. Upon removing the pulley from the shaft, be sure to note the number of spacer washers that go on the inside of the pulley to the end of the shaft. Use the same amount when installing the pulley. THIS IS IMPORTANT FOR CLUTCH ALIGNMENT.

IT IS IMPERATIVE THAT THE REMAINING COMPONENT SYSTEMS OF THE MACHINE BE RETURNED TO THEIR ORIGINAL EQUIPMENT CONDITION IN ORDER TO OBTAIN FULL BENEFIT FROM THIS MODIFICATION.

BRUTANZA ENGINEERING, INC.

Chuck Srock (g.h.)

Chuck Srock
Service Manager

BRUTANZA ENGINEERING

service bulletin

Bulletin # 108

Subject: Drive Clutch Bushing Change

Date Dec. 14, 1972


Salsbury is currently supplying us with a new bushing for the 850 drive clutch, which is stock on the 1973 Bruts now in the field. This bushing is BRUTANZA part number 21511-10, and is a one piece cup, one of the product improvements earmarked for the 1973 production.

The single piece cup bushing offers several advantages from the standpoint of original manufacture as well as customer service. In this new configuration, the center bushing is retained by the movable face return spring. It, therefore, requires no special tools for field replacement.

In the specific situation where a bushing has failed, the high operating temperature has caused a size variance in the bushing, resulting in a seizure on the main hub. This condition could cause the original bushing to be displaced from the moveable face. Since the one piece bushing is normalized for a greater operating temperature range and is retained by the spring, trouble free service and long life is expected.

There will be a \$1.00 charge to the dealers for this item, and your account will be credited in full upon receipt of a warranty form properly filled out with the serial numbers of the machine on which the bushing has been installed.

BRUTANZA SERVICE DEPARTMENT


Chuck Srock
Manager

BRUTANZA ENGINEERING

service bulletin

Bulletin # 110

Date Dec. 14, 1972

Subject: Ice Buildup Around Exhaust

On all machines, it is recommended that the excess gap in the body around the muffler outlet be plugged with a fiberglass insulation. This will prevent a buildup of ice and snow from collecting around the hole, which could cause a moist vapor to collect and get into the carburetors. This will ~~make~~ the engine miss, and cause poor performance.

The gap must be completely plugged to eliminate this possible problem.

Bulletin # 111

Date Dec. 14, 1972

Subject: Frozen Track

It has been noted that under some conditions, the track will freeze to the slides. Before a machine is driven, the track should be checked; if frozen, it should be broken loose, either by hand or by jumping on the machine.

Failure to free the track from the slides could result in a burned belt.

Please inform your customers of this condition.

BRUTANZA SERVICE DEPARTMENT

Chuck Srock

Chuck Srock
Manager

BRUTANZA ENGINEERING

service bulletin

Bulletin # 112

Subject: Carb Setting

Date Dec. 13, 1972

In view of the variables in the carburetors, we would like to change the reading in the owners manual to read as follows:

Set high speed needle to 1 turn open. This should be on the rich side, so adjust according to plug color. We feel that the 3/4 turn reading is not enough in all cases.

Please check this out, and adjust accordingly.

BRUTANZA SERVICE DEPARTMENT

Chuck Srock

Chuck Srock
Manager

BRUTANZA ENGINEERING

service bulletin

Bulletin # 109

Date Dec. 14, 1972

Subject: Impulse Tube Fitting Relationship to Steering Post

It has been detected on some of the machines in the field, that the impulse tube fittings on the right hand carburetor come too close to the steering post. We recommend that you check this on machines in stock, and notify your customers of this possible condition. Should you find this condition to be present on any of the machines you service, turn the fitting so that it will clear the post. In some cases, it may be necessary to bend the post to clear the impulse fitting.

BRUTANZA SERVICE DEPARTMENT



Chuck Srock

Manager