

MOUNT SEPARATOR AS HIGH AS POSSIBLE ON FIRE WALL WITH SAFETY WIRE OR CLAMP PROVIDED. CONNECT EXISTING BREATHER HOSE TO INLET OF SEPARATOR.

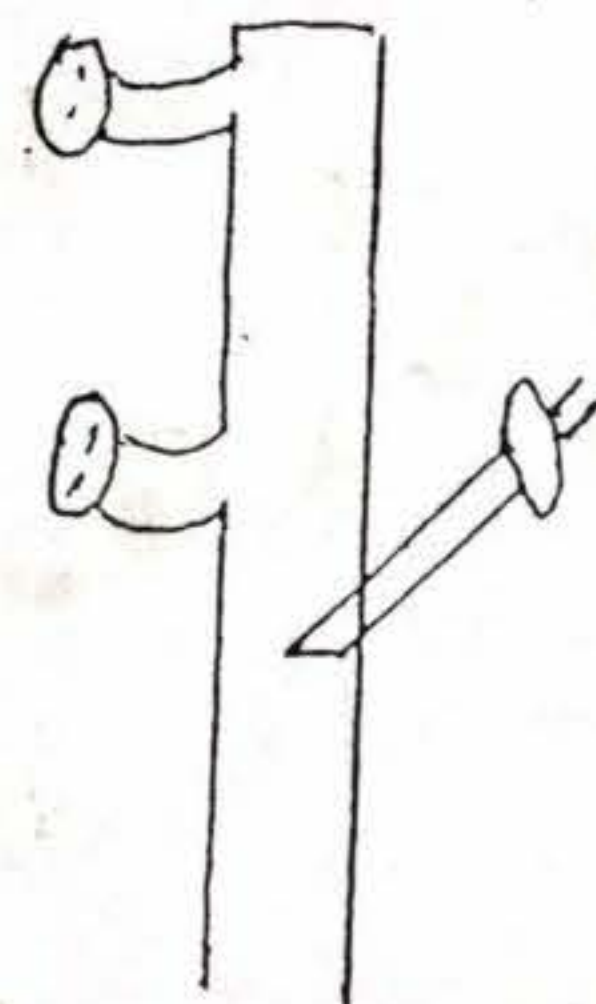
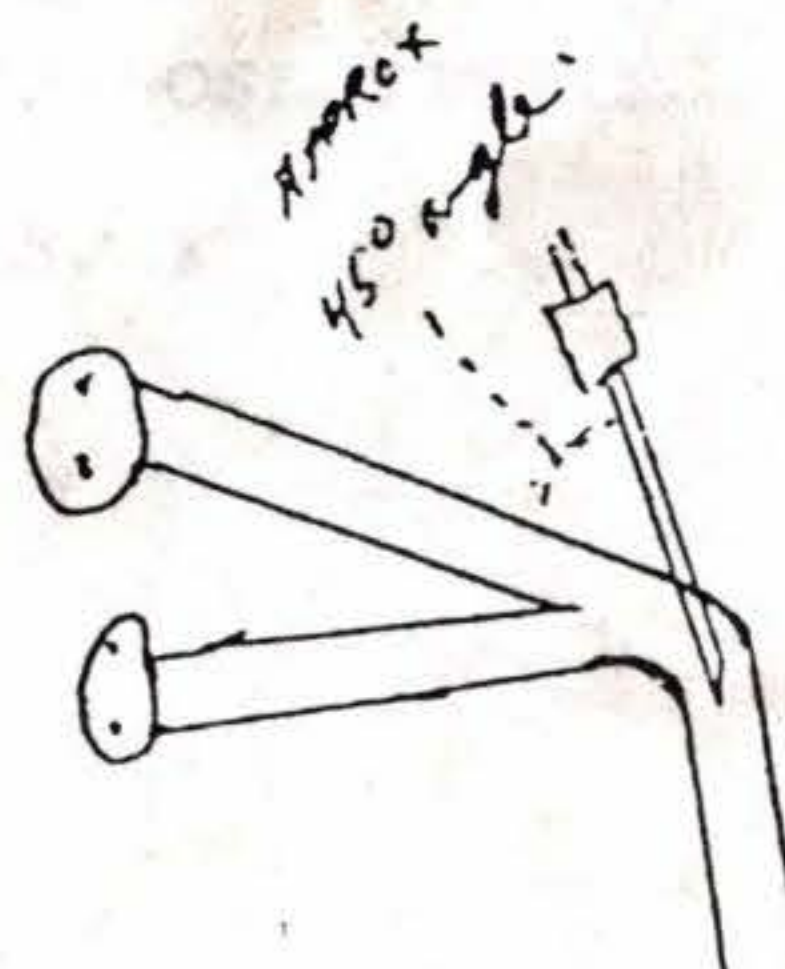
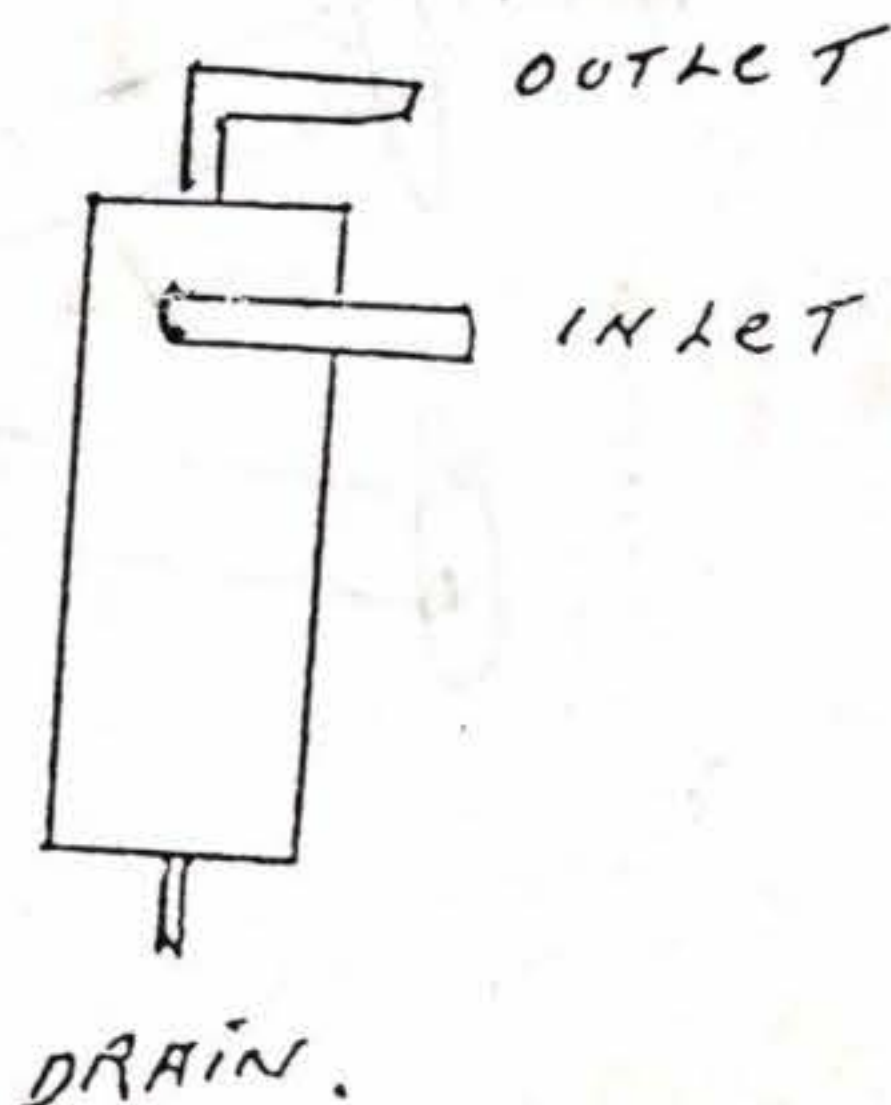
REMOVE $3/8$ " PLUG IN CASE WHICH IS BELOW OIL FILTER STACK, AND INSTALL HOSE FITTING, THEN INSTALL $3/8$ " HOSE TO THIS FITTING AND TO DRAIN ON SEPARATOR WITH CLAMPS PROVIDED. THE 320 PROBABLY DOES NOT HAVE THE PLUG IN CASE, SO MARK THE OIL FILLER TUBE THAT YOU HAVE PROBABLY ALREADY SHORTENED. REMOVE IT AND DRILL AND TAP IT FOR $1/8$ " PIPE FITTING. AS LOW ON TUBE AS POSSIBLE.

NEXT DRILL HOLE IN EXHAUST SYSTEM WHERE SHOWN IN DRAWING, "BRIDERS TYPE EXHAUST," AND WELD IN THE STAINLESS TUBING, AT A 45° ANGLE AS SHOWN. TUBING END SHOULD BE DOWN STREAM FROM WHERE CYLINDER PIPES JOIN, NEXT SCREW ON THE ANTI-BACKFIRE VALVE, THEN TRIM THE POLYURETHANE TUBING AS NEEDED AND INSTALL ON VALVE AND OUTLET SIDE OF SEPARATOR WITH CLAMPS PROVIDED.

NEXT UNBOLT AND LOWER CARBURETOR --INSTALL SPACER WITH $3/8$ HOSE FITTING IN IT WITH OLD GASKET ON ONE SIDE AND NEW GASKET ON THE OTHER SIDE, RAISE CARBURETOR BACK UP AND RE-BOLT. IF THE CARBURETOR STUDS ARE TOO SHORT, REMOVE THEM AND INSTALL LONGER ONES. THEY ARE AVAILABLE FROM ANY LOCAL AUTO PARTS SUPPLY STORE. THEN CUT $5/8$ I.D. POLYURETHANE TUBING AND INSERT THE REDUCING "T". INSTALL THE $11/32$ BLACK HOSE TO THIS "T" AND THE LARGE END OF PVC VALVE TO THE OTHER END OF HOSE. THEN CONNECT THE $11/32$ I.D. BLACK HOSE TO THE SMALL END OF PVC VALVE AND THE $3/8$ HOSE FITTING IN THE CARB PLATE THAT YOU INSTALLED, WITH CLAMPS PROVIDED. REPLACE THE $5/8$ I.D. POLYURETHANE TUBING WITH THE $19/32$ BLACK HOSE BETWEEN THE "T" AND THE VALVE IN EXHAUST PIPE.

NOW START ENGINE AND CHECK TO SEE IF CARBURETOR NEEDS IDLE ADJUSTMENT. PROBABLY WILL NOT. IF IT DOES ADJUST, RE-COWL AND GO FLY.

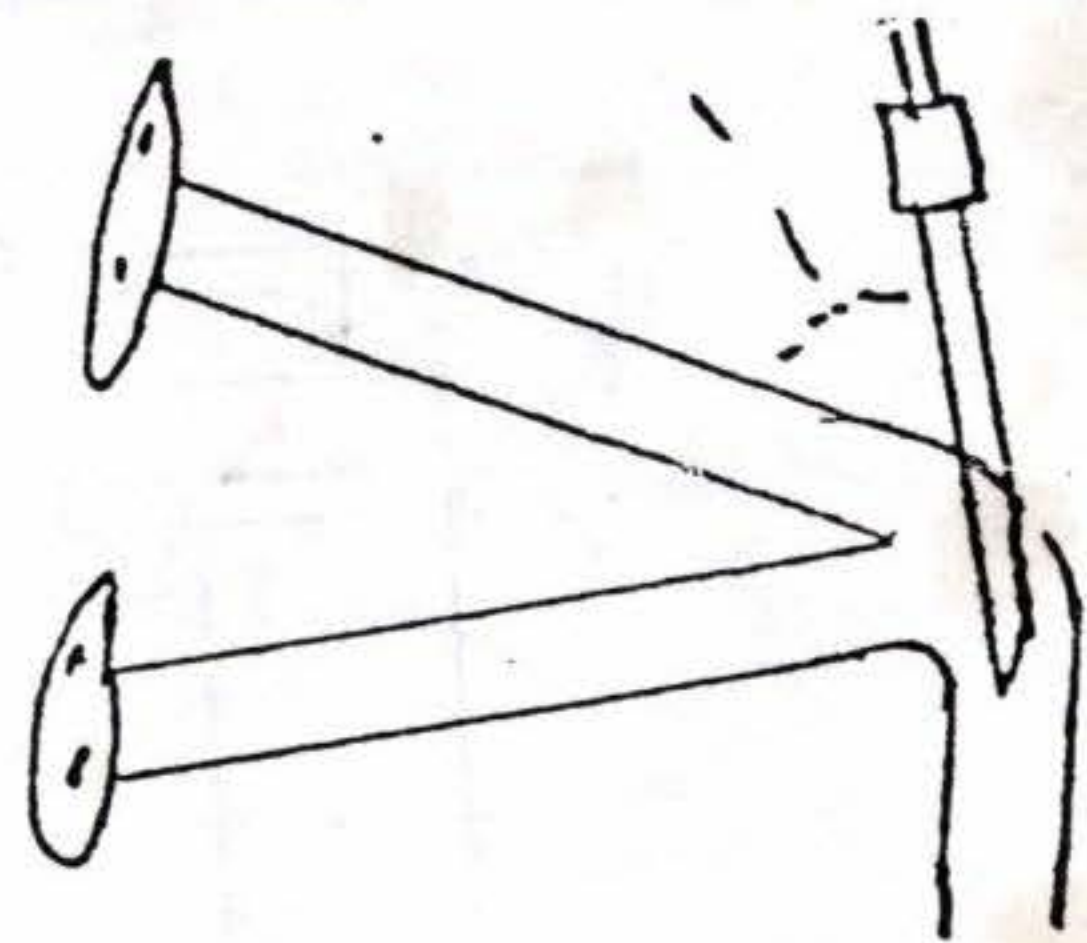
MAINTENANCE: BI-ANNUALLY CHECK ONE WAY VALVE TO SEE THAT IT IS OPERATING AND CHECK FOR ANY CARBON BUILD UP WHERE TUBING ENTERS EXHAUST. IF ANY --REAM OR CLEAN OUT WITH A SCREWDRIVER. ANNUALLY REPLACE THE PVC VALVE.



REMOVE STARTER COVLR, AND INSTALL SEPARATOR. REMOVE VENT FITTING FROM ENGINE CASE AND INSTALL 1/2" PLUG PROVIDED.

DRILL HOLE IN EXHAUST SYSTEM WHERE SHOWN IN DRAWING, "SANDERS TYPE EXHAUST", AND WELD IN THE STAINLESS TUBING, AT A 45° ANGLE AS SHOWN. NEXT SCREW ON THE ANTIBACKFIRE VALVE. THEN TRIM THE POLYURETHANE TUBING AS NEEDED AND INSTALL ON VALVE AND SEPARATOR WITH CLAMPS PROVIDED.

MAINTENANCE: BIANUALLY CHECK ONE WAY VALVE TO SEE THAT IT IS OPERATING AND CHECK FOR ANY CARBON BUILD UP WHERE TUBING ENTERS EXHAUST. IF ANY REAM OR CLEAN OUT WITH A SCREWDRIVER.



CV8 CHECK VALVE

PCV 280 VALVE

SEPERATOR

EXHAUST PIPE FITTING

REDUCING "T"

CARB. SPACER

CARB. GASKET

CLAMPS

CLAMPS

3/8" POLY CLEAR HOSE

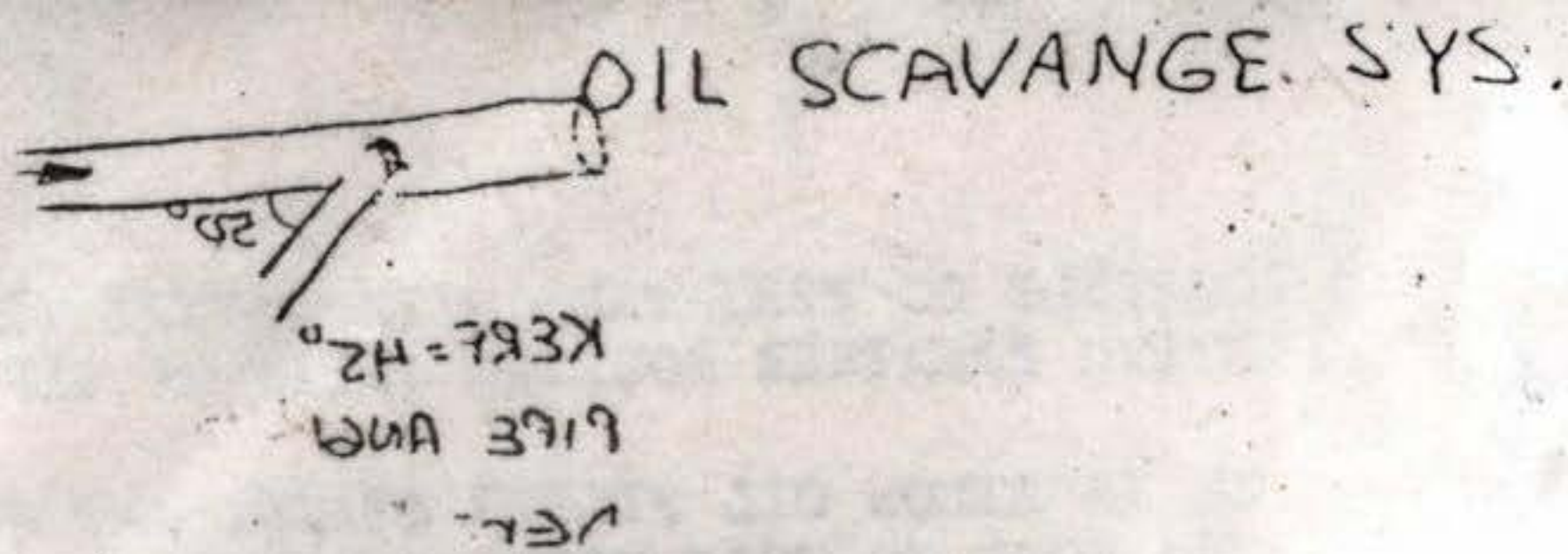
19/32 BLACK HOSE

15/32 BLACK HOSE

ADELL CLAMP

1/8" PIPE 3/8 HOSE FITTING

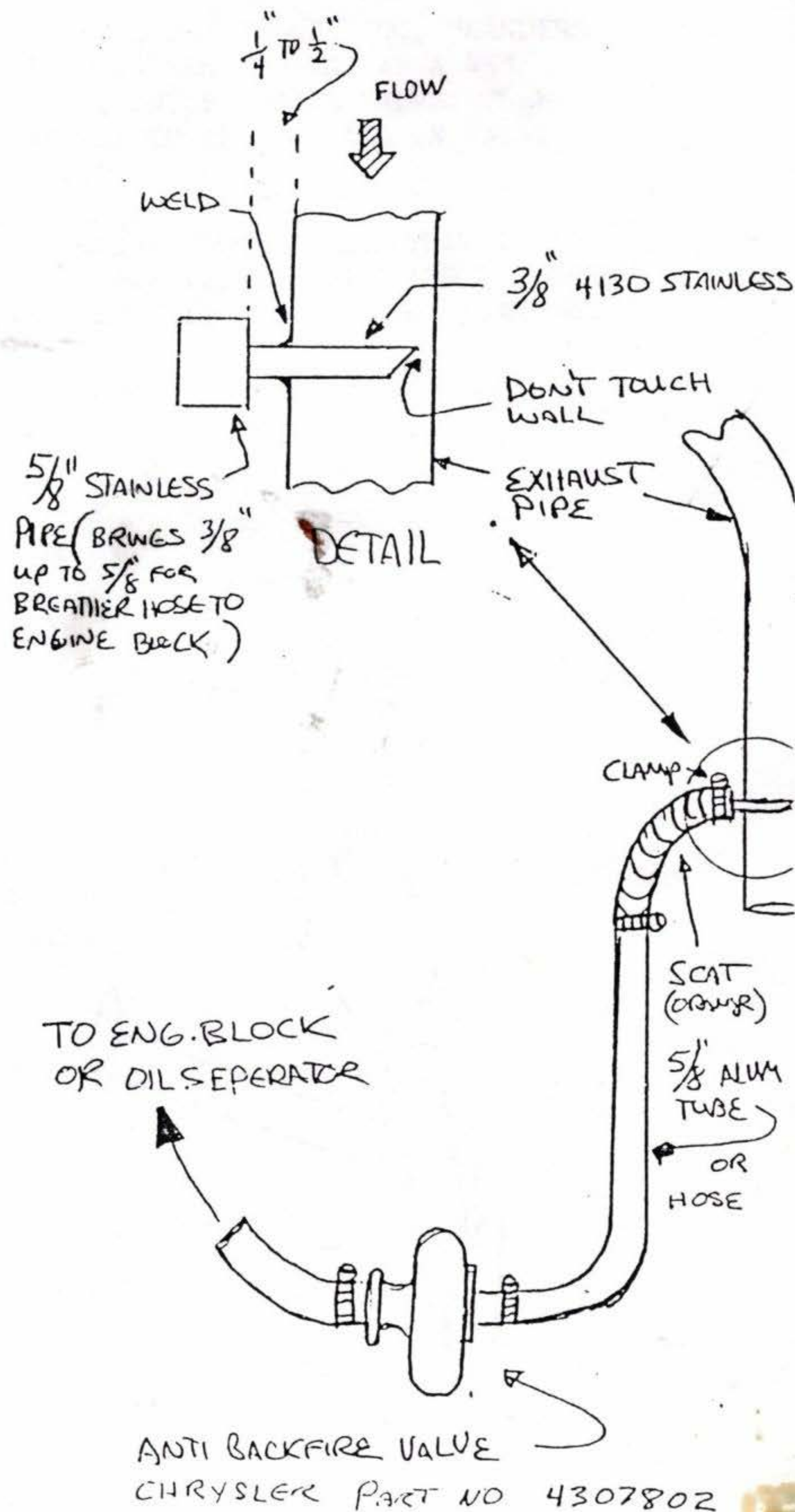
11/32 BLACK HOSE



SELECT ANGLE TO WELD SCAVENGE
PIPE AT. SELECT DEPTH AND KERF ANGLE

MY SCAVENGE TUBE IS WELDED ABOUT
6" FROM THE END OF THE EXHAUST
PIPE. DIDN'T TRY DIFFERENT POSITIONS
FROM THE END.

TO CHECK VACUUM, REMOVE DIPSTICK.
START ENGINE, OBSERVE VAPOR COMING
OUT OF TUBE. WHEN VAPOR DISAPPEARS
SYSTEM IS NOW WORKING. SHOULD
HAPPEN AROUND 1200 RPM.



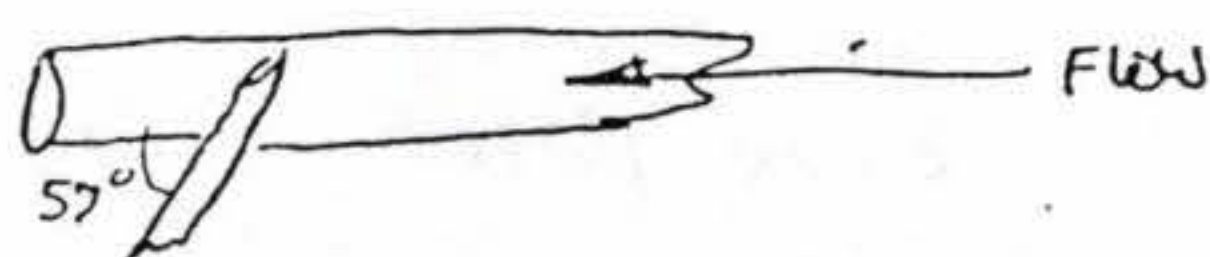
29, 75



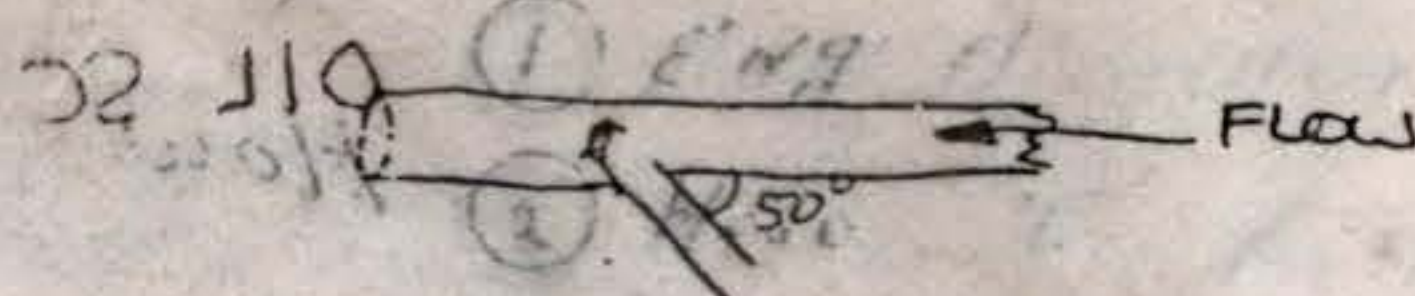
KERF = 28°
 PIPE ANGLE 50°
 DEPTH 1 = SIDE = 1.12" Suction
 2 = MIDDLE = 1.50"
 3. END = 1.0"



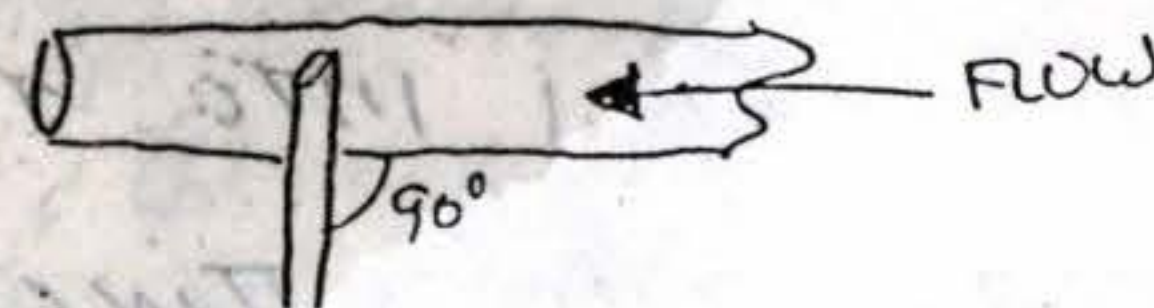
KERF = 28°
 PIPE ANGLE = 90°
 DEPTH 1 = 1.50" Suction
 2 = 2.00"
 3 = 2.50"



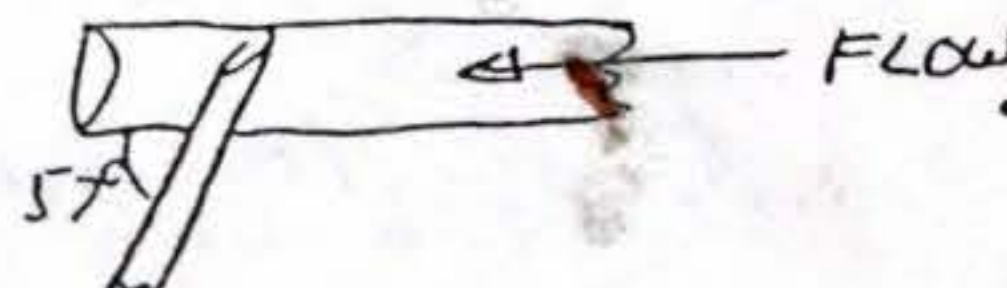
KERF 28°
 PIPE ANGLE = REVERSE 57°
 DEPTH 1 = .90" Suction
 2 = .80
 3 = 1.60"



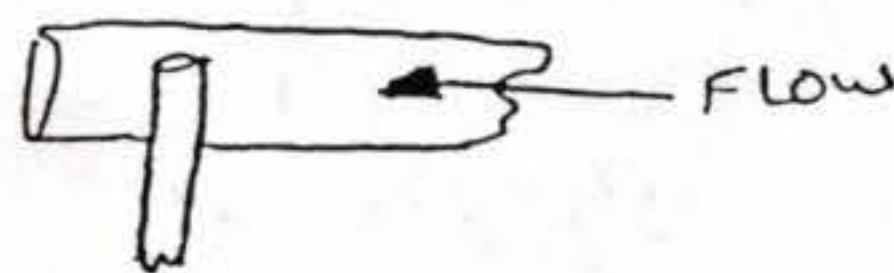
KERF = 45°
 PIPE ANGLE 50°
 DEPTH 1 = 1.0"
 2 = 1.2"
 3 = 1.2"



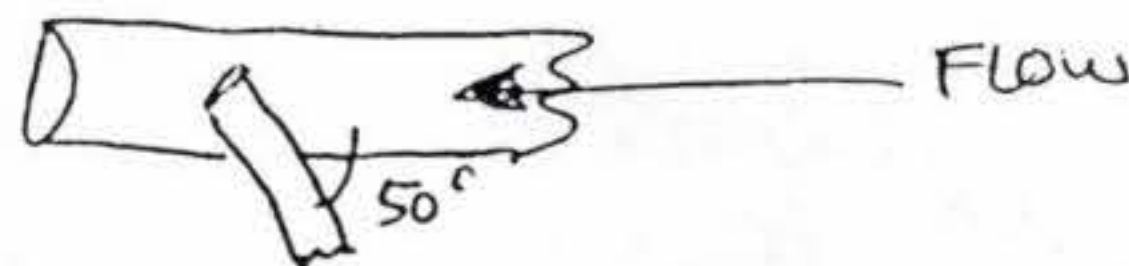
KERF = 45°
 PIPE ANGLE 90°
 DEPTH 1 = 1.10"
 2 = 1.60"
 3 = 2.30"



KERF
 PIPE ANGLE
 DEPTH 1 =
 2 = 3.00"
 3 = 2.50"



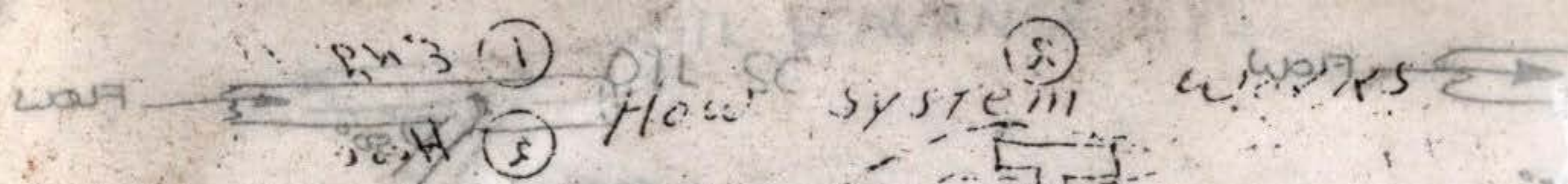
KERF = 0°
 PIPE ANGLE 90°
 DEPTH 1 = .50"
 2 = 1.75"
 3 = 1.50"
 (BACK OFF OF WALL $\frac{1}{4}$) 4 = 2.60"



KERF 0°
 PIPE ANGLE 50°
 DEPTH 1 = .75"
 2 = 1.0"
 3 = .75"

EXPLANATION OF DATA:

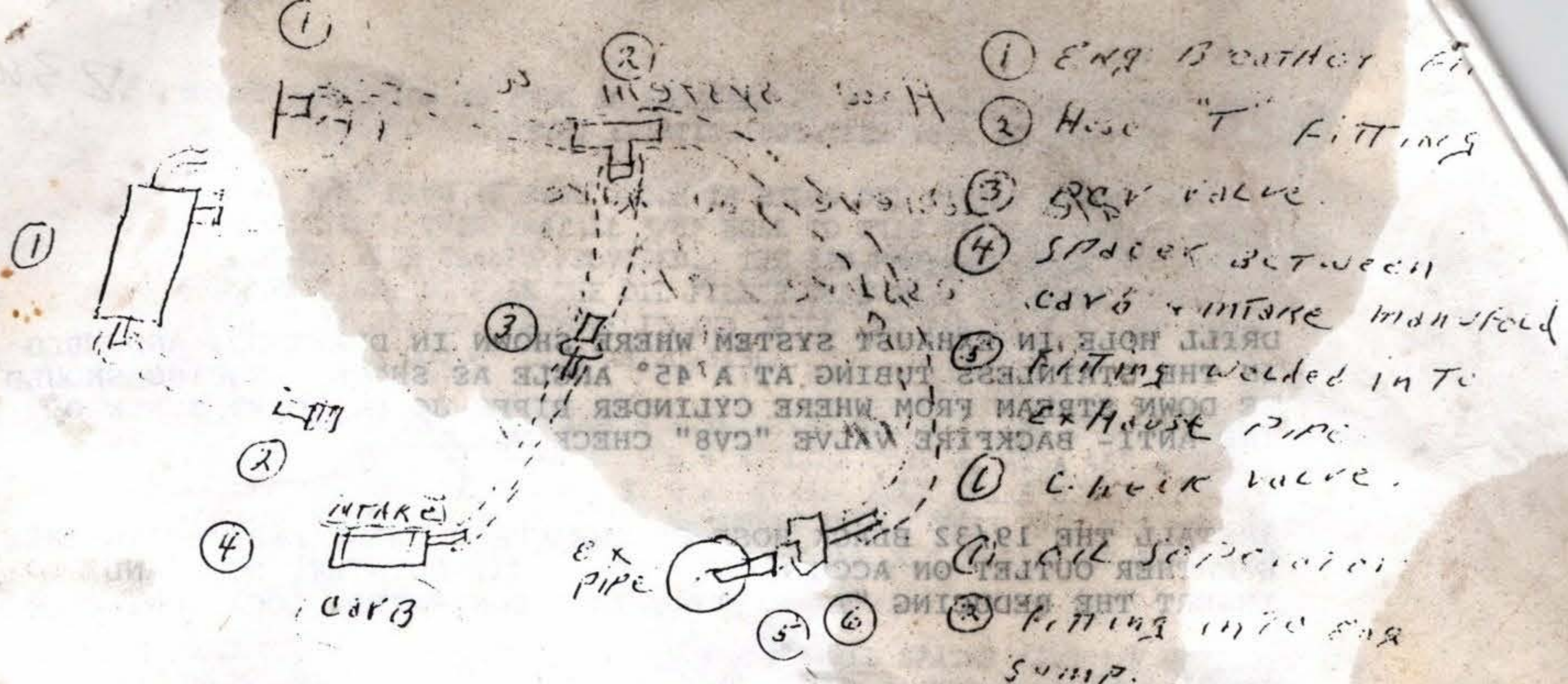
1. DEPTH = DEPTH 1 MEANS THAT THE SUCTION PIPE IS JUST BARELY INSIDE THE EXHAUST PIPE
 DEPTH 2 MEANS THE SUCTION PIPE IS PUT IN THE MIDDLE OF THE EXHAUST PIPE.
 DEPTH 3 MEANS THE SUCTION PIPE IS PUSHED ALL THE WAY THRU THE EXHAUST PIPE AND WILL BE $\frac{1}{32}$ " AWAY FROM TOUCHING THE INSIDE WALL OF THE OPPOSITE SIDE OF THE EXHAUST PIPE. DO NOT TOUCH THE OPPOSITE SIDE - IT WILL DECREASE THE VACUUM
2. KERF ANGLE IS ANGLE ON SMALL SUCTION PIPE
3. PIPE ANGLE IS THE ANGLE THAT SUCTION PIPE INTERSECTS EXHAUST PIPE



AT 2000 RPM, you have HIGH VACUUM, + ACC. manifold pressure, CHECK VALVE #⑥ IS CLOSED, VACUUM OPENS P.V. #③ AND THE FUMES E.T. ARE RECYCLED INTO THE INTAKE SECTION OF THE ENG. THRU THE FITTING IN THE SPACE BETWEEN THE CARB + INTAKE OF ENG. When THROTTLE IS OPENED manifold PRESS INCREASES, VACUUM DECREASES, THEREFORE P.V. CHECK VALVE #③ CLOSES, AT THE SAME TIME THE INCREASED EXHAUST FLOW PASSING THE FITTING #⑤ IN THE EXHAUST CREATES A VACUUM, WHICH OPENS CHECK VALVE #⑥, THEREFORE FUMES + OIL ARE BURNED IN EXHAUST PIPE, THEREFORE NO OIL E.T. ON CRAWLING.

W. H. SEPERATION

BREATHING HOSE GOES FROM FITTING #① TO TOP OF OIL SEPARATOR, THEN FROM BOTTOM OF SEPARATOR TO HOSE FITTING #② FUMES CONTINUE THE SYSTEM, RECYCLE OR GO EXHAUST, SEPERATED OIL DURING THRU FITTING #③ BACK INTO ENGINE.



How SYSTEM WORKS.

AT Idle, where you HAVE HIGH VACUUM & low manifold pressure. CHECK VALVE #6 is closed, VACUUM opens PCV #3 AND THE fumes etc ARE Recycled INTO THE INTAKE section of the eng THRU THE FITTING IN THE SPACER BETWEEN THE CARB & INTAKE of eng. When THROTTLE is opened ~~manifold~~ manifold press increases, VACUUM decreases. There fore PCV check valve #3 closes, AT THE same time the increased EXHAUST flow passing THE FITTING #5 IN THE EXHAUST creates A VACUUM, WHICH OPENS CHECK #6. THERE fore fumes + OIL ARE BURNT IN EXHAUST PIPE, THERE fore NO OIL & EOT ON COATING.

WITH Separator.

BREATHER HOSE goes FROM fitting # (1) INLET of oil separator, THEN FROM OUTLET of separator TO HOSE FITTING # (2) Fumes continue THRU system. RECYCLE of EXHAUST separated OIL DRAINS THRU FITTING # (2) AT THE

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INSTALL THE 19/32 BLACK HOSE ON THE CHECK VALVE AND THE ENGINE BREATHER OUTLET ON ACCESSORY CASE. NEXT CUT THIS HOSE AND INSERT THE REDUCING "T" FITTING IN A CONVENIENT LOCATION.

TRIM HOSES AS NEEDED TO FIT. INSTALL THE 15/32 BLACK HOSE, ON THE "T" AND THE LARGE END OF THE PCV VALVE.

REMOVE ONE OF THE 1/8" PIPE PLUGS IN SUMP AND INSTALL THE 1/8" PIPE FITTING. INSTALL THE 11/32 BLACK HOSE TO THIS FITTING AND THE SMALL END OF THE PCV VALVE.

NOW START ENGINE AND CHECK TO SEE IF CARBURETOR NEEDS IDLE ADJUSTMENT. PROBABLY NOT. IF IT DOES, ADJUST, RE-COWL AND GO FLY.

MAINTENANCE: BI-ANNUALLY CHECK ONE WAY VALVE TO SEE THAT IT IS OPERATING AND CHECK FOR ANY CARBON BUILD UP WHERE TUBING ENTERS EXHAUST. IF ANY, REAM OR CLEAN OUT WITH A SCREWDRIVER. ANNUALLY REPLACE THE PCV VALVE.

