SYMBOLS

CONTENTS

ELECTROSTATIC DISCHARGE (ESD) SENSITIVE DEVICES

All ESD sensitive components are Solid State and the following information applies to them.

The ESD symbol (Figure 1) is used on schematics (Figure 2) to indicate which components are ESD sensitive. When handling any electronic part, the service technician should follow the guidelines below to reduce any possible electrostatic charge build-up on the service technician's body and inadvertent discharge to the electronic part. If it is not known whether or not a component is ESD sensitive, assume it is susceptible.

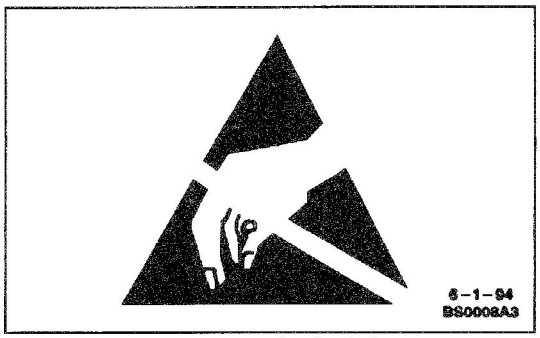


Figure 1 - ESD Symbol

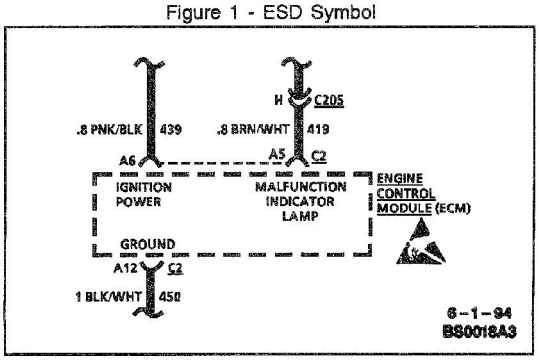


Figure 2 - Typical Schematic

HANDLING PROCEDURES

1. Always touch a known good ground before handling the part. This should be repeated while handling the part and more frequently after sliding across a seat, sitting down from a standing position or walking a distance.
2. Avoid touching electrical terminals of the part, unless so instructed by a written diagnostic procedure.
3. When using a voltmeter, be sure to connect the ground lead first.
4. Do not remove a part from its protective package until it is time to install the part.
5. Before removing the part from its package, ground the package to a known good ground on the vehicle.

MEASURING PROCEDURES

The circuits shown within the boxes are greatly simplified. Do not troubleshoot by measuring resistance at any terminal of these devices unless so instructed by a written diagnostic procedure. Due to the simplification of the schematics, resistance measurements could be misleading, or could lead to electrostatic discharge.

SUPPLEMENTAL INFLATABLE RESTRAINT (SIR) SYSTEM

The SIR symbol (Figure 3) is used on schematics to alert the technician to the following important caution:

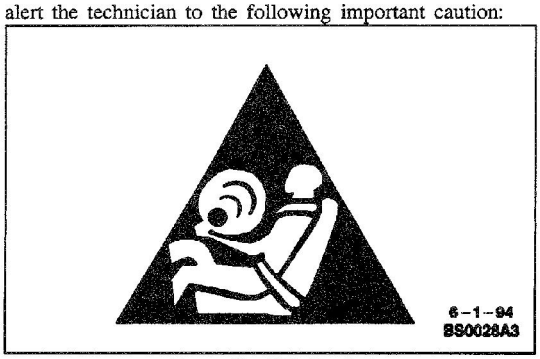


Figure 3 - SIR Symbol

CAUTION: This vehicle is equipped with Supplemental Inflatable Restraint (SIR). Refer to CAUTIONS in SECTION 9J under "ON-VEHICLE SERVICE" and the SIR Component and Wiring Location view in SECTION 9J before performing service on or around SIR components or wiring. Failure to follow CAUTIONS could result in possible air bag deployment, personal injury, or otherwise unneeded SIR system repairs.

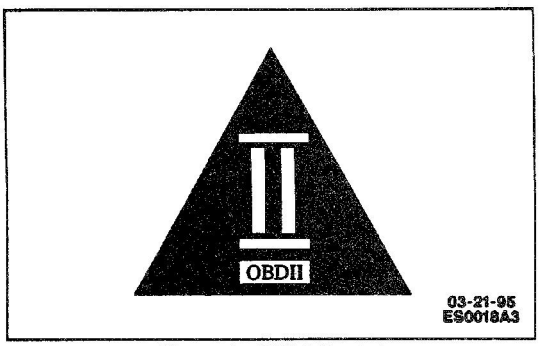
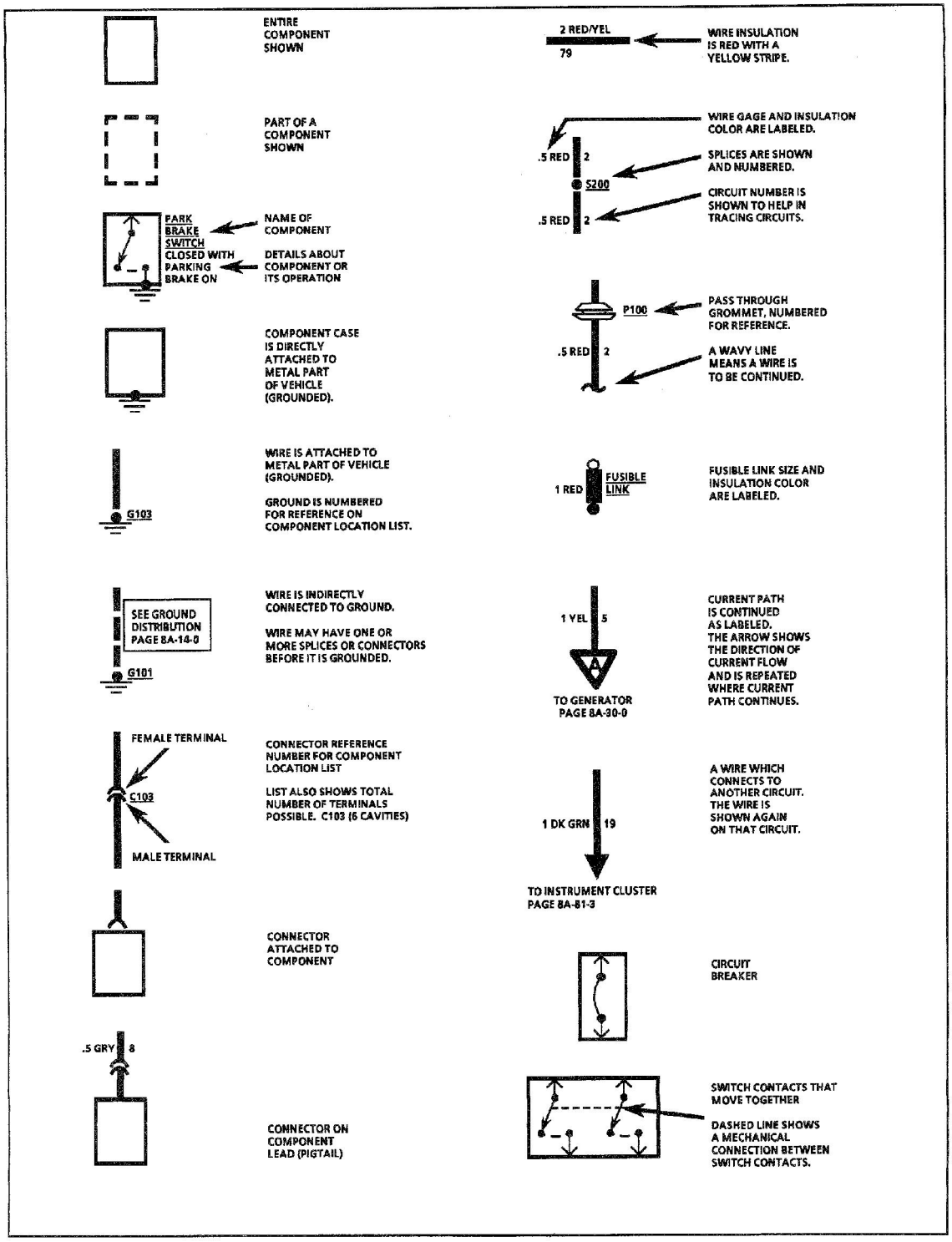


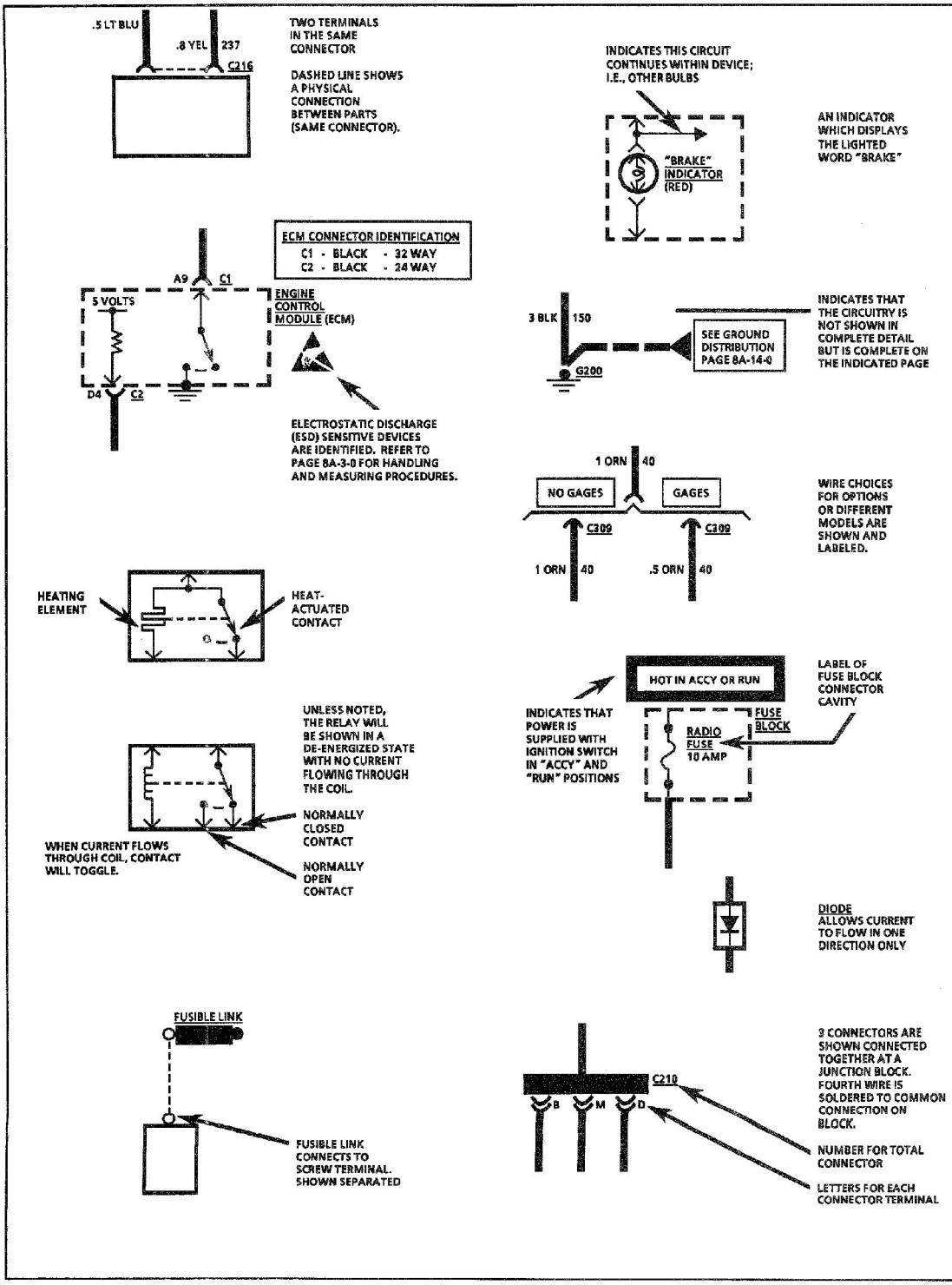
Figure 4 - OBDII Symbol

ON-BOARD DIAGNOSTICS II (OBDII) SYMBOL

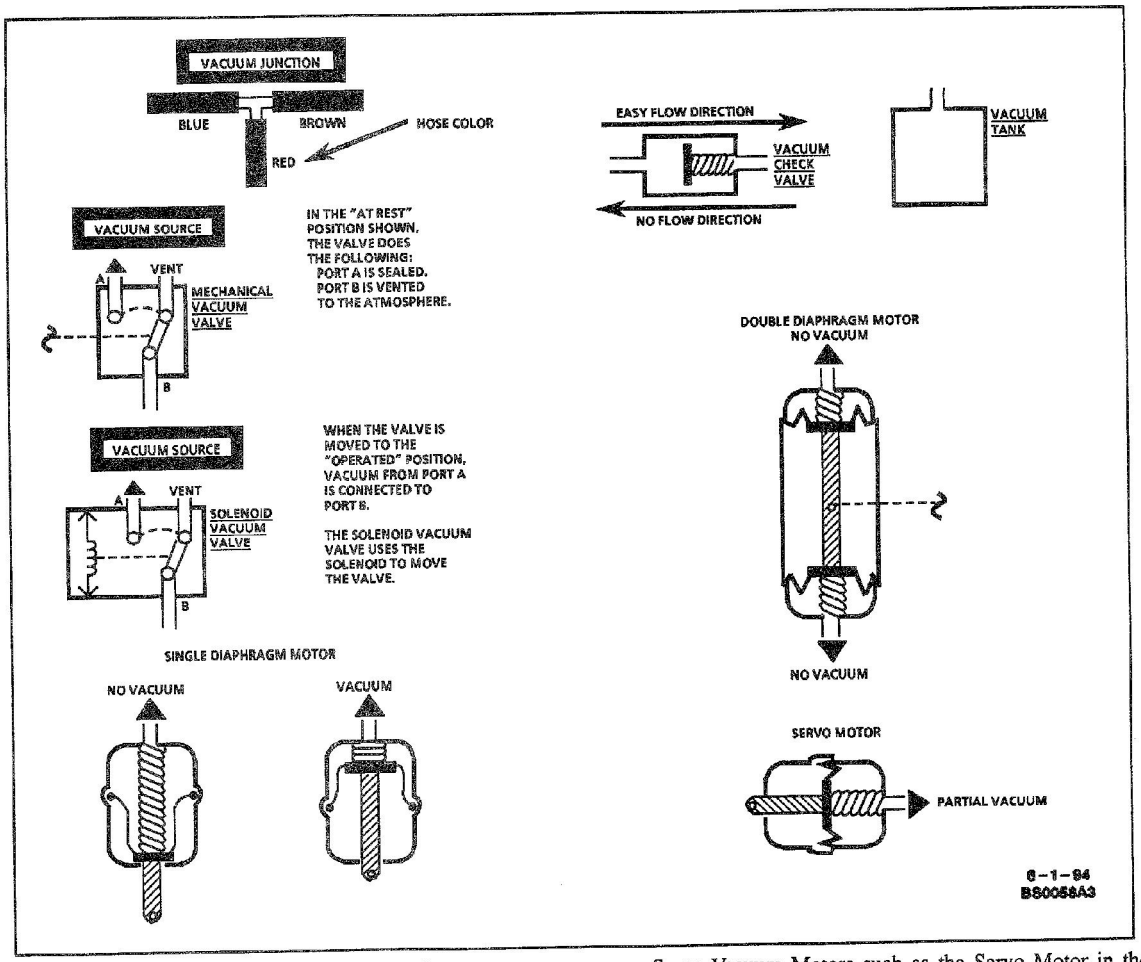
The OBDII symbol (Figure 4) is used on circuit diagrams to alert the technician that the circuit is essential for proper OBDII emission control circuit operation. Any circuit which, if it fails, causes the SERVICE ENGINE SOON indicator to turn on, is identified as an OBDII circuit.

SYMBOLS


ENTIRE COMPONENT SHOWN
PART OF A COMPONENT SHOWN
PARK BRAKE SWITCH
CLOSED WITH PARKING BRAKE ON
NAME OF COMPONENT
DETAILS ABOUT COMPONENT OR ITS OPERATION
COMPONENT CASE IS DIRECTLY ATTACHED TO METAL PART OF VEHICLE (GROUNDED).
G103
WIRE IS ATTACHED TO METAL PART OF VEHICLE (GROUNDED).
GROUND IS NUMBERED FOR REFERENCE ON COMPONENT LOCATION LIST.
SEE GROUND DISTRIBUTION PAGE 8A-14-0
G101
WIRE IS INDIRECTLY CONNECTED TO GROUND.
WIRE MAY HAVE ONE OR MORE SPLICES OR CONNECTORS BEFORE IT IS GROUNDED.
FEMALE TERMINAL
C103
MALE TERMINAL
CONNECTOR REFERENCE NUMBER FOR COMPONENT LOCATION LIST
LIST ALSO SHOWS TOTAL NUMBER OF TERMINALS POSSIBLE. C103 (6 CAVITIES)
CONNECTOR ATTACHED TO COMPONENT
.5 GRY 8
CONNECTOR ON COMPONENT LEAD (PIGTAIL)
2 RED/YEL
79
WIRE INSULATION IS RED WITH A YELLOW STRIPE.
WIRE GAGE AND INSULATION COLOR ARE LABELED.
.5 RED 2
S200
.5 RED 2
SPLICES ARE SHOWN AND NUMBERED.
CIRCUIT NUMBER IS SHOWN TO HELP IN TRACING CIRCUITS.
P100
.5 RED 2
PASS THROUGH GROMMET, NUMBERED FOR REFERENCE.
A WAVY LINE MEANS A WIRE IS TO BE CONTINUED.
1 RED
FUSIBLE LINK
FUSIBLE LINK SIZE AND INSULATION COLOR ARE LABELED.
1 YEL 5
TO GENERATOR PAGE 8A-30-0
CURRENT PATH IS CONTINUED AS LABELED. THE ARROW SHOWS THE DIRECTION OF CURRENT FLOW AND IS REPEATED WHERE CURRENT PATH CONTINUES.
1 DK GRN 19
TO INSTRUMENT CLUSTER PAGE 8A-81-3
A WIRE WHICH CONNECTS TO ANOTHER CIRCUIT. THE WIRE IS SHOWN AGAIN ON THAT CIRCUIT.
CIRCUIT BREAKER
SWITCH CONTACTS THAT MOVE TOGETHER
DASHED LINE SHOWS A MECHANICAL CONNECTION BETWEEN SWITCH CONTACTS.


.5 LT BLU
.8 YEL
237
C216
TWO TERMINALS IN THE SAME CONNECTOR
DASHED LINE SHOWS A PHYSICAL CONNECTION BETWEEN PARTS (SAME CONNECTOR).
INDICATES THIS CIRCUIT CONTINUES WITHIN DEVICE; I.E., OTHER BULBS
"BRAKE" INDICATOR (RED)
AN INDICATOR WHICH DISPLAYS THE LIGHTED WORD "BRAKE"
ECM CONNECTOR IDENTIFICATION
C1 - BLACK - 32 WAY
C2 - BLACK - 24 WAY
A9
C1
5 VOLTS
ENGINE CONTROL MODULE (ECM)
D4
C2
ELECTROSTATIC DISCHARGE (ESD) SENSITIVE DEVICES ARE IDENTIFIED. REFER TO PAGE 8A-3-0 FOR HANDLING AND MEASURING PROCEDURES.
3 BLK
150
G200
SEE GROUND DISTRIBUTION PAGE 8A-14-0
INDICATES THAT THE CIRCUITRY IS NOT SHOWN IN COMPLETE DETAIL BUT IS COMPLETE ON THE INDICATED PAGE
1 ORN
40
NO GAGES
GAGES
C309
C309
1 ORN
40
.5 ORN
40
WIRE CHOICES FOR OPTIONS OR DIFFERENT MODELS ARE SHOWN AND LABELED.
HEATING ELEMENT
HEAT-ACTUATED CONTACT
UNLESS NOTED, THE RELAY WILL BE SHOWN IN A DE-ENERGIZED STATE WITH NO CURRENT FLOWING THROUGH THE COIL.
NORMALLY CLOSED CONTACT
NORMALLY OPEN CONTACT
WHEN CURRENT FLOWS THROUGH COIL, CONTACT WILL TOGGLE.
HOT IN ACCY OR RUN
INDICATES THAT POWER IS SUPPLIED WITH IGNITION SWITCH IN "ACCY" AND "RUN" POSITIONS
FUSE BLOCK
RADIO FUSE 10 AMP
LABEL OF FUSE BLOCK CONNECTOR CAVITY
DIODE
ALLOWS CURRENT TO FLOW IN ONE DIRECTION ONLY
FUSIBLE LINK
FUSIBLE LINK CONNECTS TO SCREW TERMINAL. SHOWN SEPARATED
C210
B
M
D
3 CONNECTORS ARE SHOWN CONNECTED TOGETHER AT A JUNCTION BLOCK. FOURTH WIRE IS SOLDERED TO COMMON CONNECTION ON BLOCK.
NUMBER FOR TOTAL CONNECTOR
LETTERS FOR EACH CONNECTOR TERMINAL

SYMBOLS



VACUUM MOTORS AND DEVICES

Vacuum Motors operate like electrical solenoids, mechanically pushing or pulling a shaft between two fixed positions. When vacuum is applied, the shaft is pulled in. When no vacuum is applied, the shaft is pushed all the way out by a spring.

Double Diaphragm Motors can be operated by vacuum in two directions. When there is no vacuum, the motor is in the center "at rest" position.

Some Vacuum Motors such as the Servo Motor in the Cruise Control can position the actuating arm at any position between fully extended and fully retracted. The servo is operated by a control valve that applies varying amounts of vacuum to the motor. The higher the vacuum level, the greater the retraction of the motor arm. Servo Motors work like the two position motors; the only difference is in the way the vacuum is applied. Servo Motors are generally larger and provide a calibrated control.

BLANK