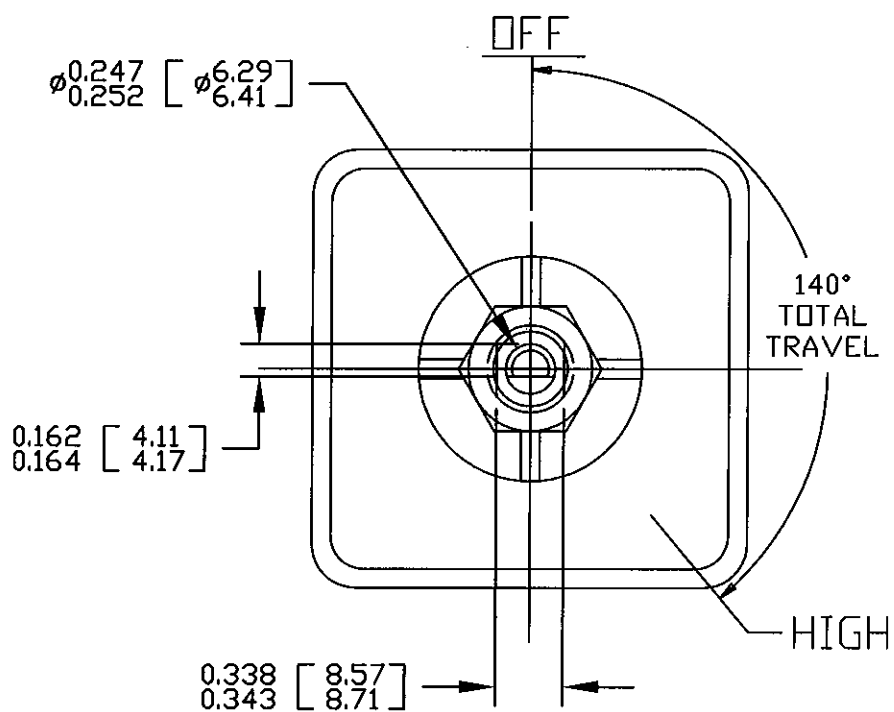
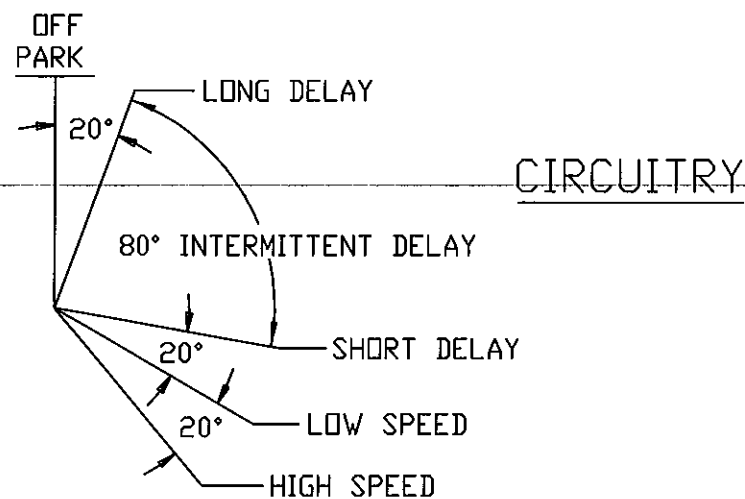
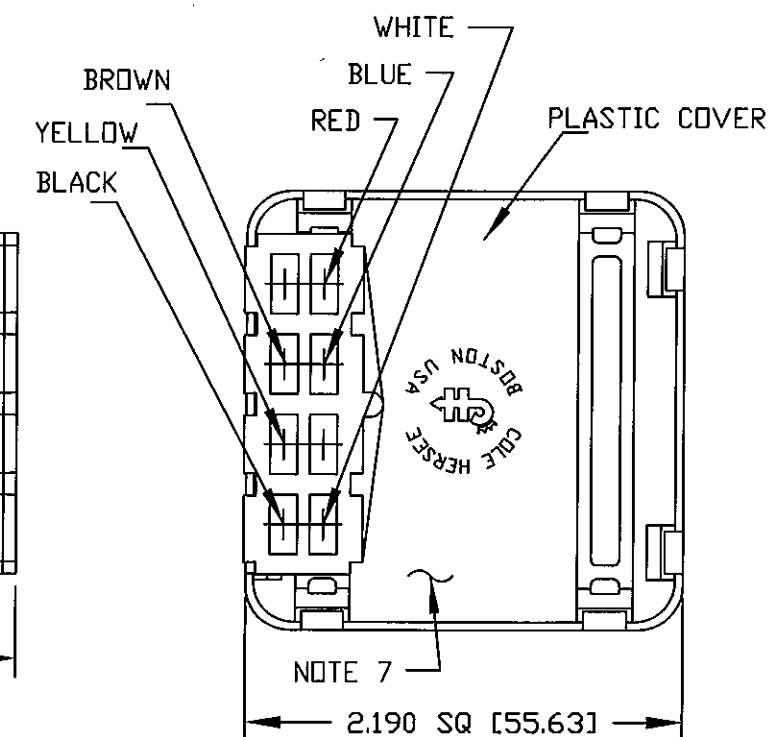
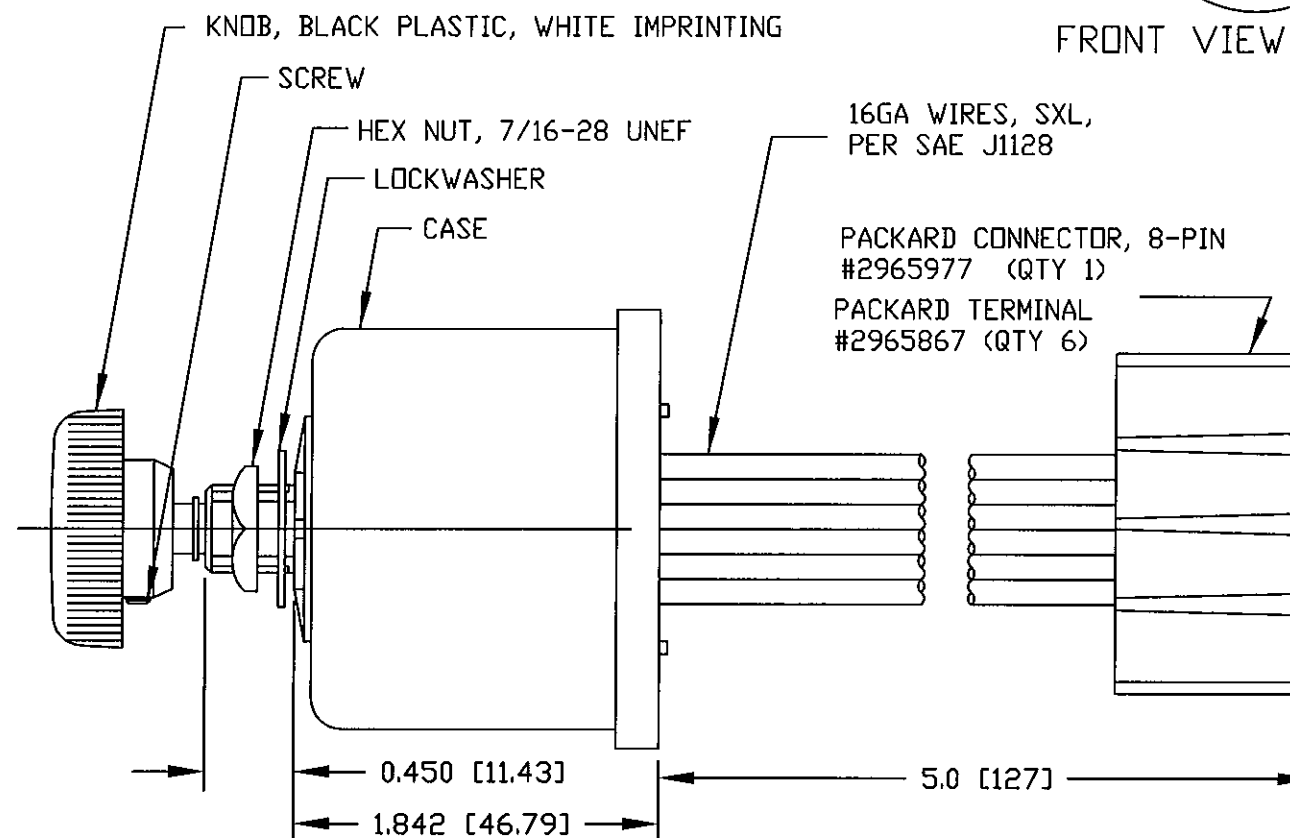


**Revision Control Record**

Rev.	Description of Change	ECN No.	Date
E	REVISED DRAWING, SSR	07035	1/25/07
F	BOM CHANGE	09588	01/15/10



FRONT VIEW OF KNOB



**NOTES:**

- DESIGNED FOR 12V SYSTEM, SINGLE MOTOR, DYNAMIC AND NON-DYNAMIC PARK. TO BE USED WITH PERMANENT MAGNET MOTOR, NEGATIVE GROUND ONLY.
- PUSH TO WASH FUNCTION: RESULTS IN 2 TO 3 WIPES AFTER RELEASE OF PUSH SWITCH.
- RATING: VOLTAGE OPERATING RANGE 9VDC TO 16VDC  
 ROTARY SWITCH ACTUATION 20,000 CYCLES MINIMUM.  
 MOTOR DRIVE: 15 AMPS CONTINUOUS. START-UP/STALL/LOCKED-ROTOR 50 AMPS. SHORT-CIRCUIT PROOF.  
 WASHER CIRCUIT 3 AMPS, PUSH SWITCH 20,000 CYCLES MINIMUM.
- MICROPROCESSOR CONTROLLED, SOLID-STATE RELAY, CURRENT LIMIT SENSE CIRCUIT, REVERSE POLARITY PROTECTED
- CONFORMS TO SAE J1455:  
 4.11 GENERAL HEAVY DUTY TRUCK ELECTRICAL ENVIRONMENT.  
 4.11.1 STEADY-STATE ELECTRICAL CHARACTERISTICS.  
 4.11.2 TRANSIENT, NOISE AND ELECTROSTATIC CHARACTERISTICS.
- ENVIRONMENTAL EXTREMES BY LOCATION.  
 5.2 INTERIOR-FORWARD.
- ALL DIMENSIONS ARE REFERENCE ONLY UNLESS NOTED OTHERWISE.
- COLE HERSEE PART NUMBER, REVISION, & DATE CODE STAMPED IN WHITE.

COLOR	FUNCTION
WHITE	MOTOR HIGH SPEED
YELLOW	MOTOR LOW SPEED
BLACK	GROUND (0V)
BROWN	WASHER PUMP
RED	VBB (12V)
BLUE	MOTOR PARK

**Tolerances** Unless otherwise specifically noted, the following are default tolerances:  
 \* 2-place Decimal Dimensions +/- .02"  
 \* 3-place Decimal Dimensions +/- .005"  
 \* Angular Dimensions +/- 1.0 Deg.  
 \* Metric: Refer to equivalent English Dimension Tolerance  
 >>> NOTE: All tolerances are Non-Cumulative. <<<

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**"REF." or an Asterisk (\*)** = Non-Toleranced Reference Dimension, shown for clarification purposes only.

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**DO NOT SCALE** - Dimensional variation may occur during printing / reproduction.

**Special Characteristics:**

- Ⓢ Critical Characteristic, relating to Safety and/or Regulatory Compliance
- Ⓧ Significant Characteristic relating to Process Control (SPC)
- Ⓚ Control Dimension relating to Form - Fit - Function as defined by Cole Hersee Company and/or the Customer

(Note that the identification of any Characteristics as being "Special" does not alter the requirement that ALL specified dimensions & tolerances must be met.)

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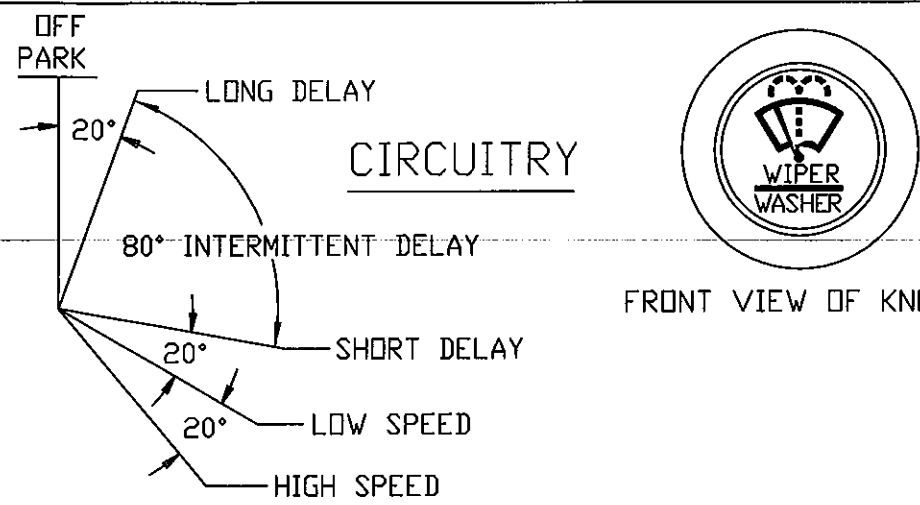
**Description:** WINDSHIELD WIPER CONTROLLER, UNIVERSAL, 12V

**Drawing / Part No.:** 75600

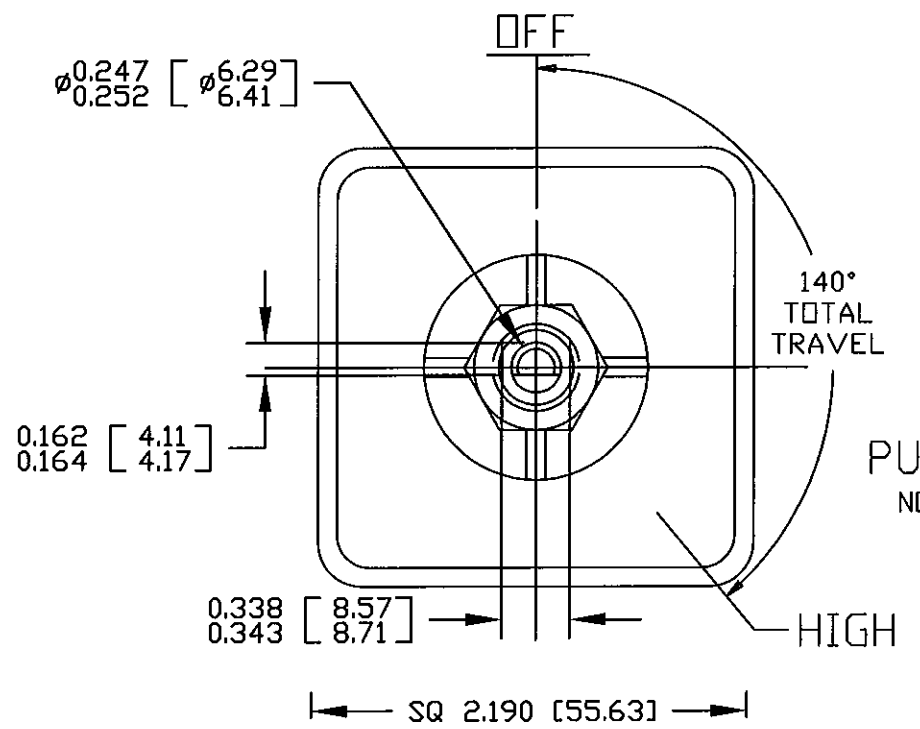
**Current Rev.:** F

**Revision Control Record**

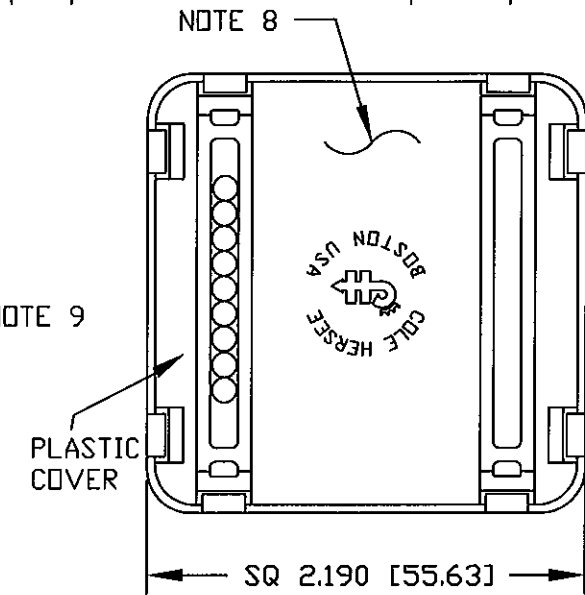
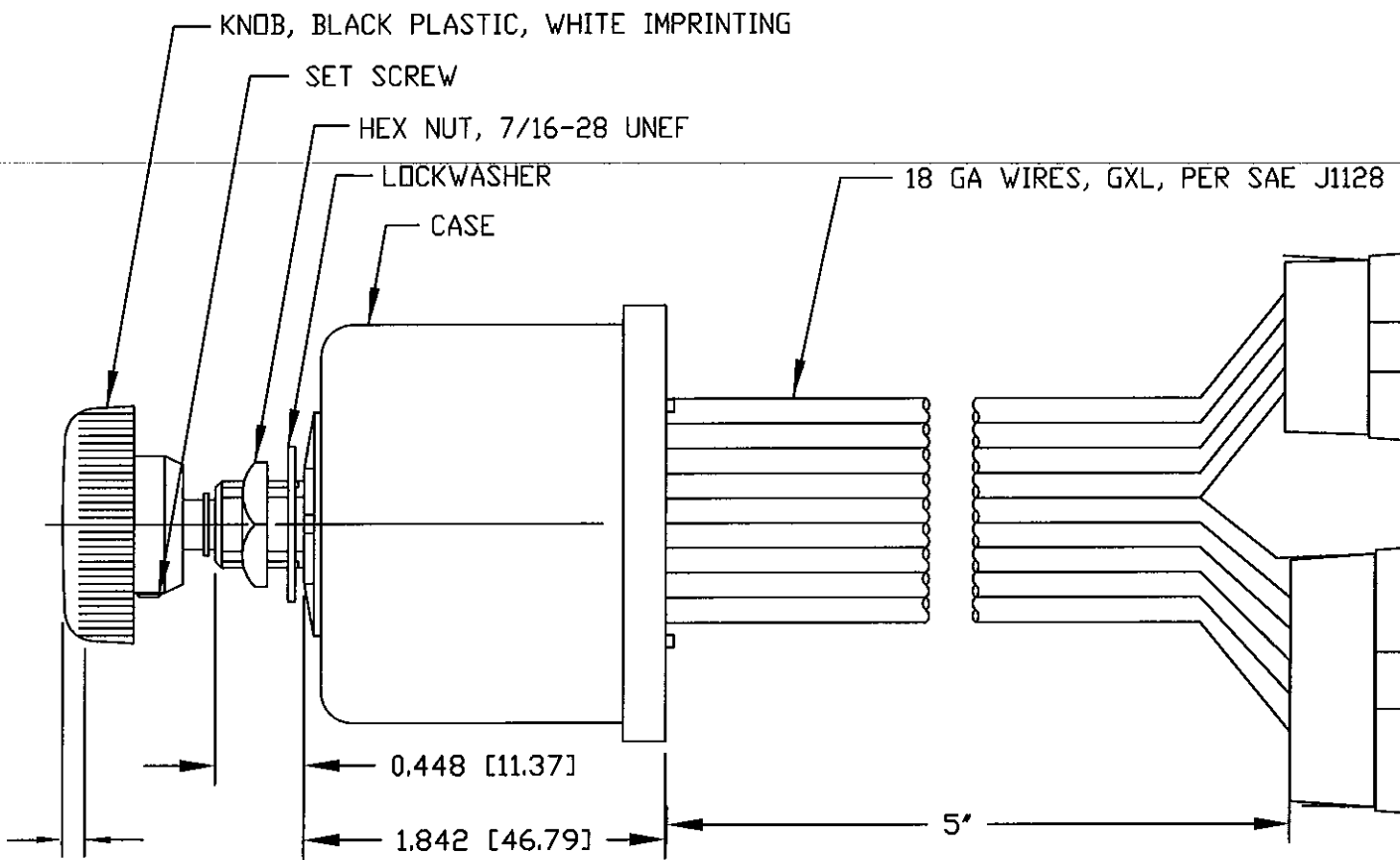
Rev.	Description of Change	ECN No.	Date
E	ADDED NOTE TO COVER VIEW	03274	7/24/03
F	CHANGE TO SSR PCB	07060	02/16/07
G	BOM CHANGE	09587	01/13/10



FRONT VIEW OF KNOB

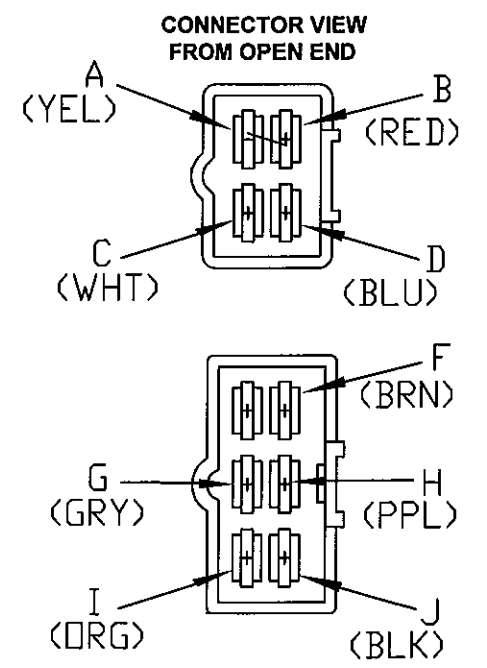


PUSH TO WASH  
NOTE 2



**NOTES:**

- DESIGNED FOR 12V SYSTEM, DUAL MOTOR, DYNAMIC AND NON-DYNAMIC PARK.
- PUSH TO WASH FUNCTION RESULTS IN 3 WIPES AFTER RELEASE OF PUSH SWITCH.
- RATING: VOLTAGE OPERATING RANGE 9VDC TO 16VDC  
 ROTARY SWITCH ACTUATION 20,000 CYCLES MINIMUM.  
 MOTOR DRIVE: 10 AMPS PER MOTOR CONTINUOUS. START-UP/STALL/LOCKED-ROTOR 30 AMPS. SHORT-CIRCUIT PROOF.  
 WASHER CIRCUIT 3 AMPS, PUSH SWITCH 20,000 CYCLES MINIMUM.
- MICROPROCESSOR CONTROLLED, SOLID-STATE RELAY, CURRENT LIMIT SENSE CIRCUIT, REVERSE POLARITY PROTECTED
- CONFORMS TO SAE J1455:  
 4.11 GENERAL HEAVY DUTY TRUCK ELECTRICAL ENVIRONMENT.  
 4.11.1 STEADY-STATE ELECTRICAL CHARACTERISTICS.  
 4.11.2 TRANSIENT, NOISE AND ELECTROSTATIC CHARACTERISTICS.
- INTERMITTENT DELAYS: 1, 2, 4, 7, 11 AND 16 SECONDS
- ALL DIMENSIONS ARE REFERENCE ONLY UNLESS NOTED OTHERWISE.
- COLE HERSEE PART NUMBER, REVISION, & DATE CODE STAMPED IN WHITE ON REAR PLASTIC COVER.
- CONNECTORS, DELPHI: 6-PIN, PART# 2977042 (QTY 1); 4-PIN, PART# 6294544 (QTY 1)  
 TERMINALS, DELPHI: PART#2965439 (QTY 10)



COLOR	FUNCTION	TERMINAL
YELLOW	LOW-SPEED MOTOR #1	A
RED	VBB (12V POWER)	B
WHITE	HIGH-SPEED MOTOR#1	C
BLUE	PARK MOTOR #1	D
BROWN	WASHER	F
GREY	HIGH-SPEED MOTOR #2	G
PURPLE	PARK MOTOR #2	H
ORANGE	LOW-SPEED MOTOR #2	I
BLACK	GROUND (0V)	J

**Tolerances** Unless otherwise specifically noted, the following are default tolerances:  
 \* 2-place Decimal Dimensions +/- .02"  
 \* 3-place Decimal Dimensions +/- .005"  
 \* Angular Dimensions +/- 1.0 Deg.  
 \* Metric: Refer to equivalent English Dimension Tolerance  
 >>> NOTE: All tolerances are Non-Cumulative. <<<

**Dimensional Units** All dimensions are expressed in inches except those shown in brackets (xxx) are expressed in millimeters

**"REF." or an Asterisk (\*)** = Non-Tolerance Reference Dimension, shown for clarification purposes only.

Used On or Ref.: **EX28333** Scale: **1:1**

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**DO NOT SCALE** - Dimensional variation may occur during printing / reproduction.

Drawn **JCS** Date **10/10/06**  
 By: Responsible Engineer: **JCS**

**Special Characteristics:**

- Critical Characteristic, relating to Safety and/or Regulatory Compliance
- Significant Characteristic relating to Process Control (SPC)
- Control Dimension relating to Form - Fit - Function as defined by Cole Hersee Company and/or the Customer

(Note that the identification of any Characteristics as being "Special" does not alter the requirement that ALL specified dimensions & tolerances must be met.)

Pg. 1

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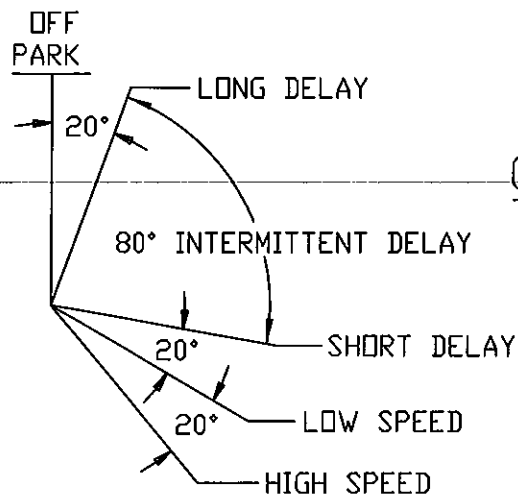
**Description:**  
**WINDSHIELD WIPER CONTROLLER, DUAL-MOTOR, W/ WIPER ENABLE, 12V, SSR**

Drawing / Part No.: **75600-01** Current Rev.: **G**

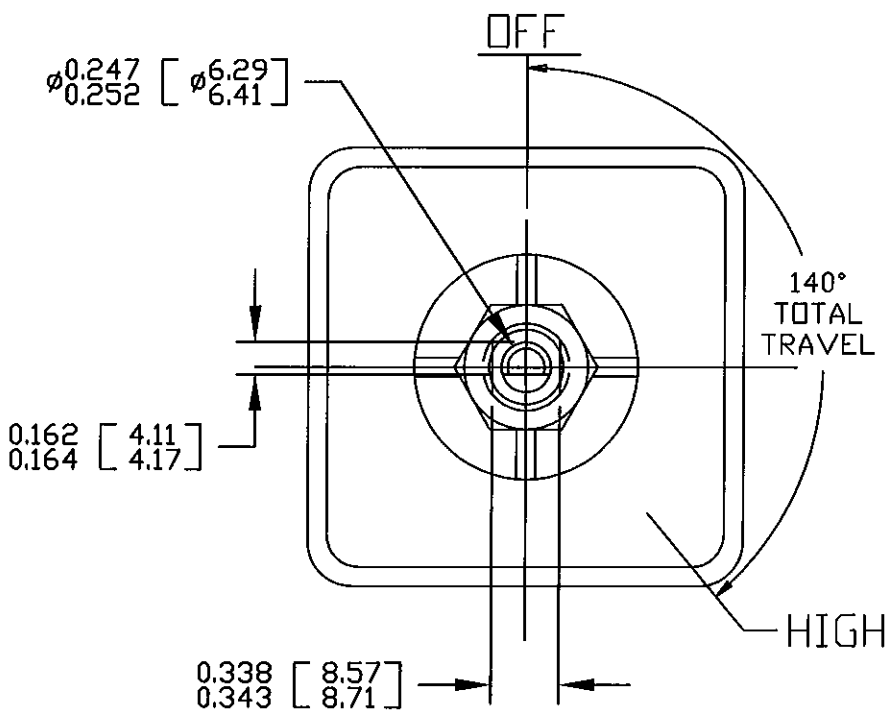


**Revision Control Record**

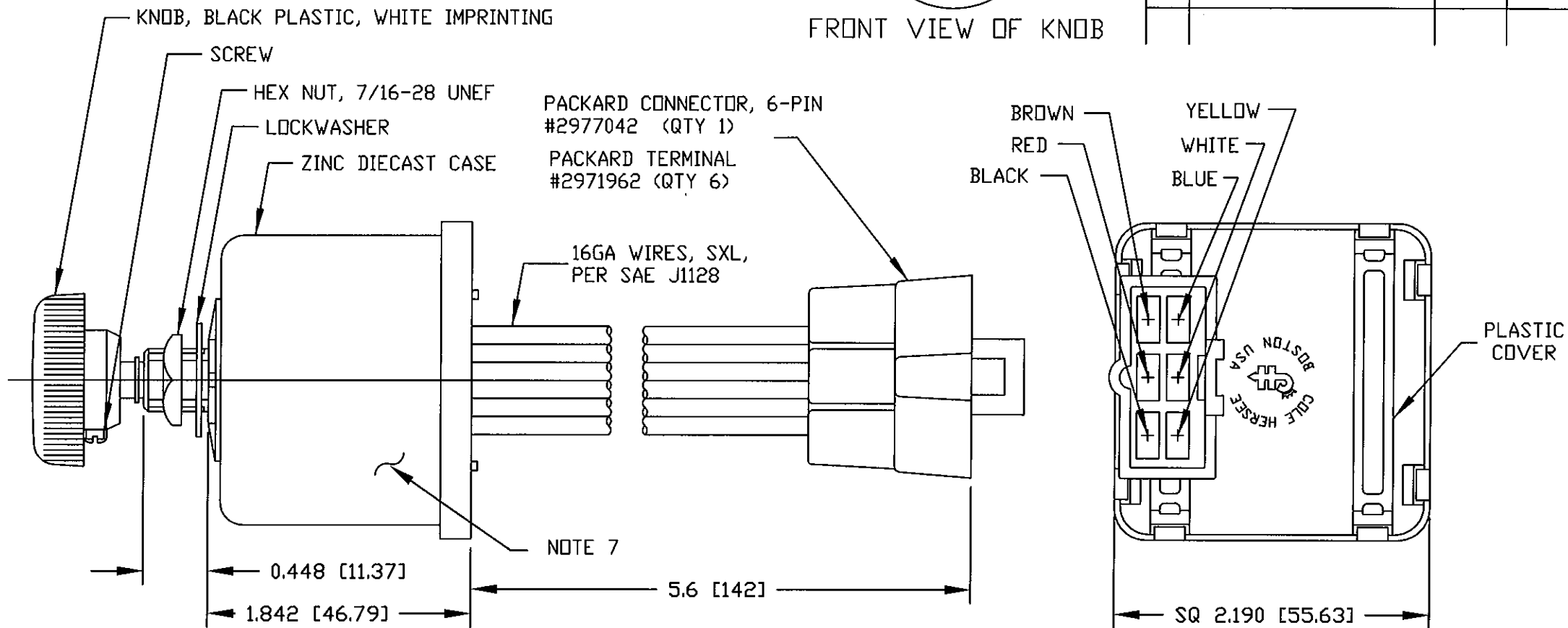
Rev.	Description of Change	ECN No.	Date
L	REVISED DRAWING, SSR	07035	1/24/07
M	EDIT NOTE 7	09257	04/21/09
N	BOM CHANGE	09588	01/15/10



**CIRCUITRY**



**FRONT VIEW OF KNOB**



- NOTES:**
- DESIGNED FOR 12V SYSTEM, SINGLE MOTOR, DYNAMIC AND NON-DYNAMIC PARK. TO BE USED WITH PERMANENT MAGNET MOTOR, NEGATIVE GROUND ONLY.
  - PUSH TO WASH FUNCTION: RESULTS IN 2 TO 3 WIPES AFTER RELEASE OF PUSH SWITCH.
  - RATING: VOLTAGE OPERATING RANGE 9VDC TO 16VDC  
 ROTARY SWITCH ACTUATION 20,000 CYCLES MINIMUM.  
 MOTOR DRIVE: 15 AMPS CONTINUOUS. START-UP/STALL/LOCKED-ROTOR 50 AMPS. SHORT-CIRCUIT PROOF.  
 WASHER CIRCUIT 3 AMPS, PUSH SWITCH 20,000 CYCLES MINIMUM.
  - MICROPROCESSOR CONTROLLED, SOLID-STATE RELAY, CURRENT LIMIT SENSE CIRCUIT, REVERSE POLARITY PROTECTED
  - CONFORMS TO SAE J1455:
    - GENERAL HEAVY DUTY TRUCK ELECTRICAL ENVIRONMENT.
      - STEADY-STATE ELECTRICAL CHARACTERISTICS.
      - TRANSIENT, NOISE AND ELECTROSTATIC CHARACTERISTICS.
    - ENVIRONMENTAL EXTREMES BY LOCATION.
      - INTERIOR-FORWARD.
  - ALL DIMENSIONS ARE REFERENCE ONLY UNLESS NOTED OTHERWISE.
  - COLE HERSEE PART NUMBER, REVISION, & DATE CODE MARKED AT RANDOM ON CASE.

COLOR	FUNCTION
WHITE	MOTOR HIGH SPEED
YELLOW	MOTOR LOW SPEED
RED	VBB (+12V)
BROWN	WASHER PUMP
BLACK	GROUND (0V)
BLUE	MOTOR PARK

**Tolerances** Unless otherwise specifically noted, the following are default tolerances:  
 \* 2-place Decimal Dimensions +/- .02"  
 \* 3-place Decimal Dimensions +/- .005"  
 \* Angular Dimensions +/- 1.0 Deg.  
 \* Metric: Refer to equivalent English Dimension Tolerance  
 >>> NOTE: All tolerances are Non-Cumulative. <<<

**Dimensional Units** All dimensions are expressed in inches except those shown in brackets (xxx) are expressed in millimeters

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Used On or Ref.: **EX26541** Scale: **1:1**

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**DO NOT SCALE** - Dimensional variation may occur during printing / reproduction.

Drawn By: **DPS** Date Drawn: **1/23/07**

**Special Characteristics:**

- Critical Characteristic, relating to Safety and/or Regulatory Compliance
- Significant Characteristic relating to Process Control (SPC)
- Control Dimension relating to Form - Fit - Function as defined by Cole Hersee Company and/or the Customer

(Note that the Identification of any Characteristics as being "Special" does not alter the requirement that ALL specified dimensions & tolerances must be met.)

Responsible Engineer: **JCS** Pg. **1**

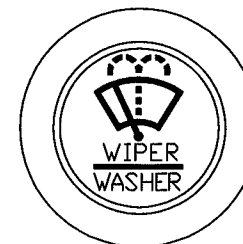
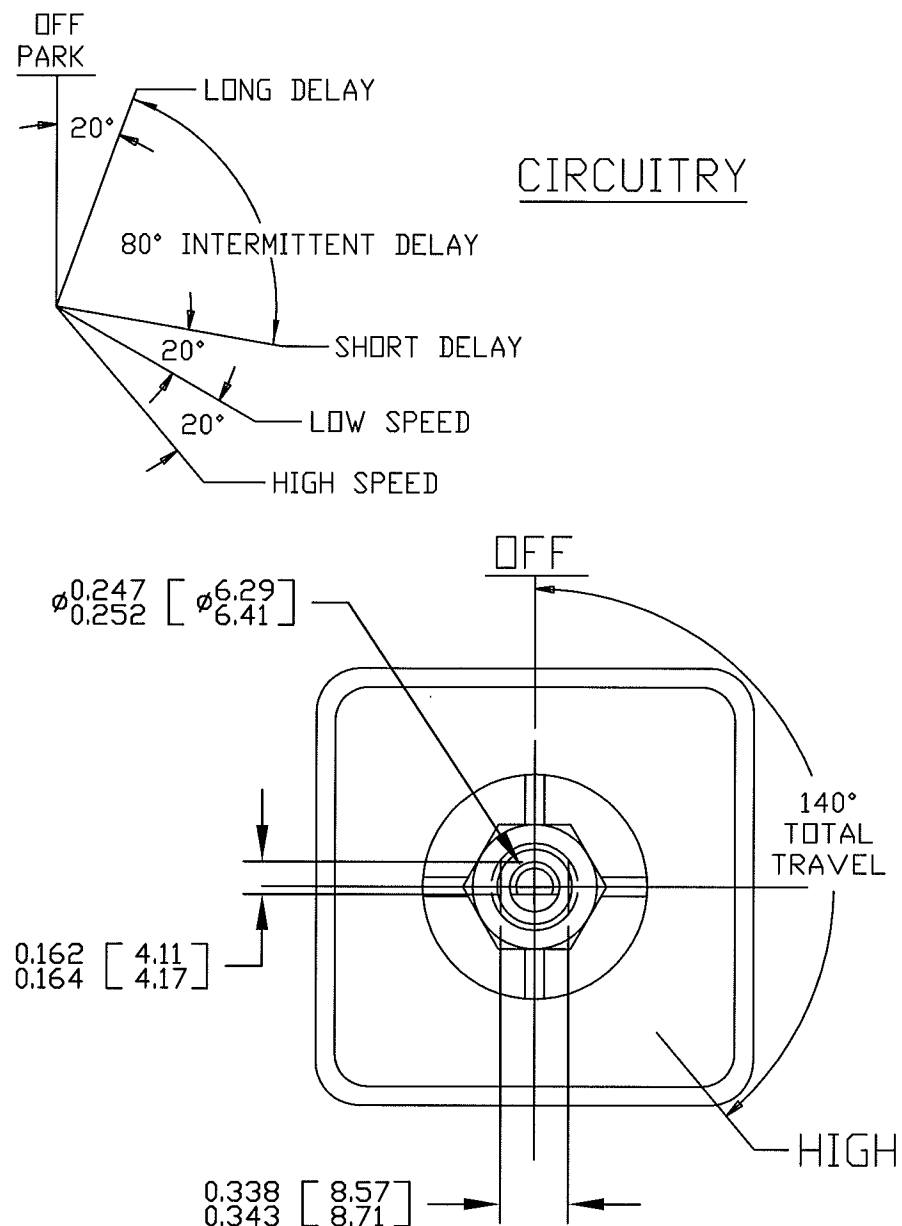
**Cole Hersee Co.**  
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 Phn: 617-268-2100 Web: www.colehersee.com

**Description:** WINDSHIELD WIPER CONTROLLER, UNIVERSAL, 12V

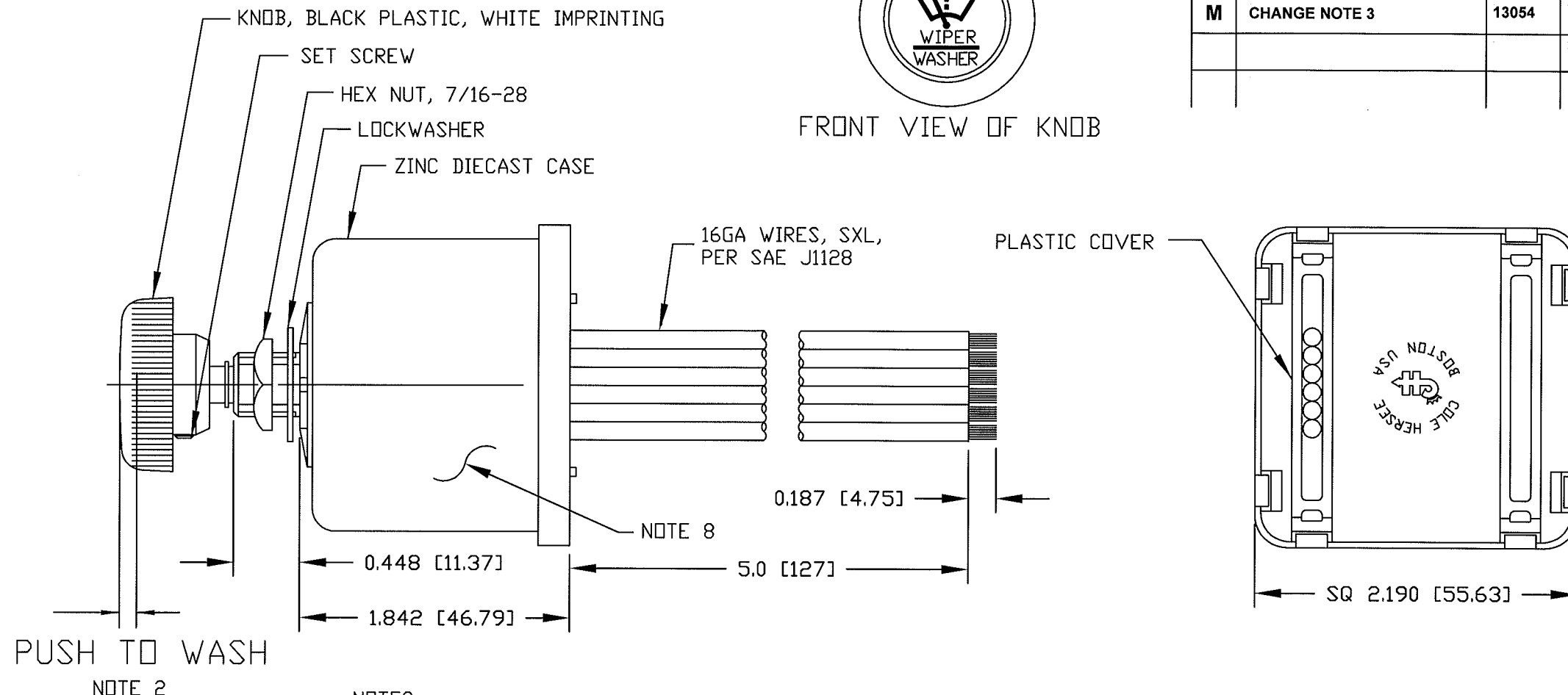
**Drawing / Part No.:** **75600-02** **Current Rev.:** **N**

**Revision Control Record**

Rev.	Description of Change	ECN No.	Date
L	CHANGE BOM	09588	01/15/10
M	CHANGE NOTE 3	13054	02/07/13



FRONT VIEW OF KNOB



**NOTES:**

- DESIGNED FOR 12V SYSTEM, SINGLE MOTOR, DYNAMIC AND NON-DYNAMIC PARK. TO BE USED WITH PERMANENT MAGNET MOTOR, NEGATIVE GROUND ONLY.
- PUSH TO WASH FUNCTION: RESULTS IN 2 TO 3 WIPES AFTER RELEASE OF PUSH SWITCH.
- RATING: VOLTAGE OPERATING RANGE 9VDC TO 16VDC  
ROTARY SWITCH ACTUATION 20,000 CYCLES MINIMUM.  
MOTOR DRIVE: 15 AMPS CONTINUOUS. START-UP/STALL/LOCKED-ROTOR 50 AMPS. SHORT-CIRCUIT PROTECTED<sup>(M)</sup>  
WASHER CIRCUIT 3 AMPS, PUSH SWITCH 20,000 CYCLES MINIMUM.
- MICROPROCESSOR CONTROLLED, SOLID-STATE RELAY, CURRENT LIMIT SENSE CIRCUIT, REVERSE POLARITY PROTECTED
- CONFORMS TO SAE J1455:  
4.11 GENERAL HEAVY DUTY TRUCK ELECTRICAL ENVIRONMENT.  
4.11.1 STEADY-STATE ELECTRICAL CHARACTERISTICS.  
4.11.2 TRANSIENT, NOISE AND ELECTROSTATIC CHARACTERISTICS.
- ENVIRONMENTAL EXTREMES BY LOCATION.  
5.2 INTERIOR-FORWARD.
- ALL STEEL PARTS PLATED
- ALL DIMENSIONS ARE REFERENCE ONLY UNLESS NOTED OTHERWISE.
- COLE HERSEE PART NUMBER, REVISION, & DATE CODE MARKED AT RANDOM ON CASE.

COLOR	FUNCTION
WHITE	MOTOR HIGH SPEED
YELLOW	MOTOR LOW SPEED
RED	VBB (+12V)
BROWN	WASHER PUMP
BLACK	GROUND (0V)
BLUE	MOTOR PARK

**Tolerances** Unless otherwise specifically noted, the following are default tolerances:  
 \* 2-place Decimal Dimensions +/- .02"  
 \* 3-place Decimal Dimensions +/- .005"  
 \* Angular Dimensions +/- 1.0 Deg.  
 \* Metric: Refer to equivalent English Dimension Tolerance  
 >>> NOTE: All tolerances are Non-Cumulative. <<<

**Dimensional Units** All dimensions are expressed in inches except those shown in brackets (xxx) are expressed in millimeters

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Used On or Ref.: **EX28241** Scale: **1:1**

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**DO NOT SCALE** - Dimensional variation may occur during printing / reproduction.

Drawn By: **JCS** Date Drawn: **1/9/07**

**Special Characteristics:**

**CC** Critical Characteristic, relating to Safety and/or Regulatory Compliance

**X** Significant Characteristic relating to Process Control (SPC)

**KC** Control Dimension relating to Form - Fit - Function as defined by Cole Hersee Company and/or the Customer

(Note that the identification of any Characteristics as being "Special" does not alter the requirement that ALL specified dimensions & tolerances must be met.)

Responsible Engineer: **JCS** Pg. **1**

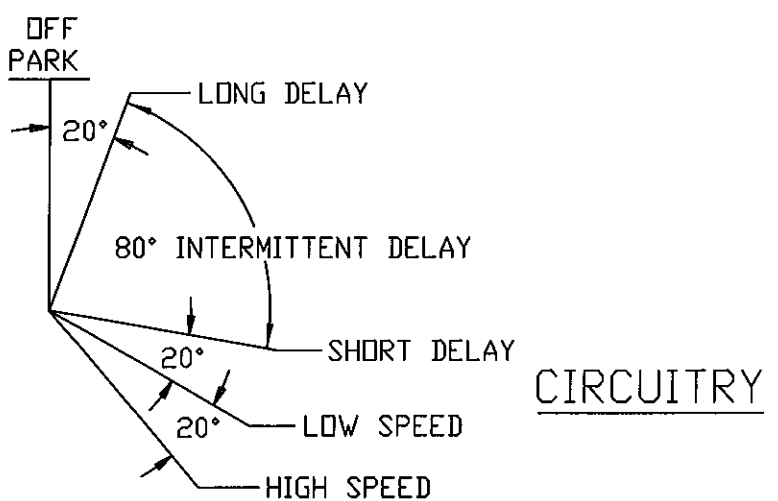
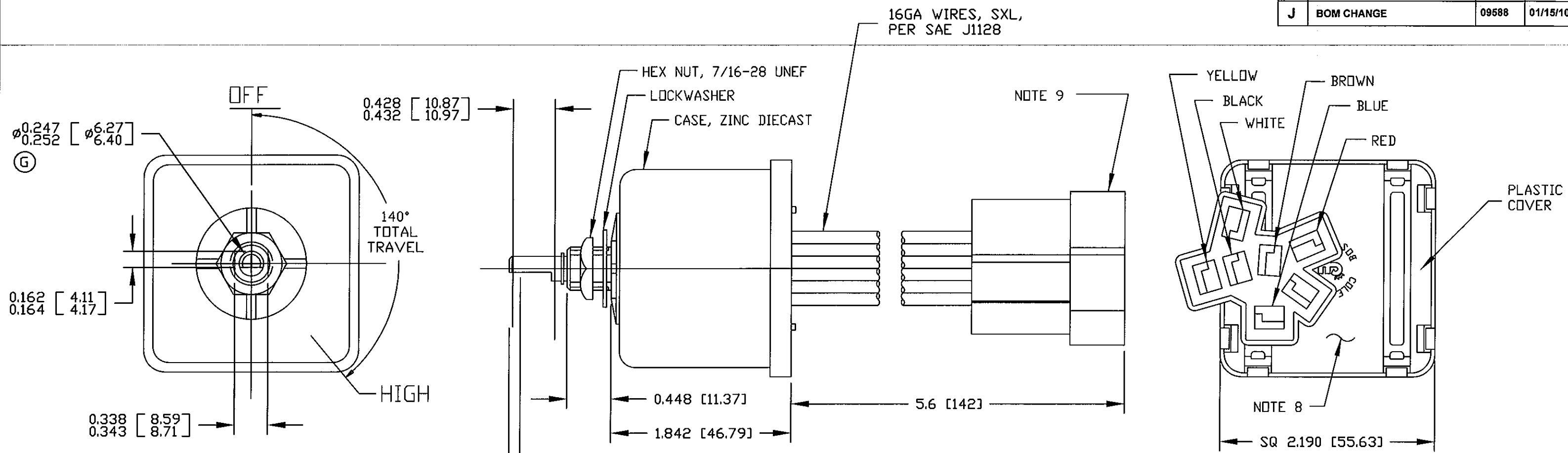
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**Description:** WINDSHIELD WIPER CONTROLLER, UNIVERSAL, 12V

Drawing / Part No.: **75600-04** Current Rev.: **M**

**Revision Control Record**

Rev.	Description of Change	ECN No.	Date
H	CHANGED TO SSR	07074	03/02/07
J	BOM CHANGE	09588	01/15/10



- NOTES:
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  - PUSH TO WASH FUNCTION: RESULTS IN 2 TO 3 WIPES AFTER RELEASE OF PUSH SWITCH.
  - RATING: VOLTAGE OPERATING RANGE 9VDC TO 16VDC  
 ROTARY SWITCH ACTUATION 20,000 CYCLES MINIMUM.  
 MOTOR DRIVE: 15 AMPS CONTINUOUS. START-UP/STALL/LOCKED-ROTOR 50 AMPS. SHORT-CIRCUIT PROOF.  
 WASHER CIRCUIT 3 AMPS, PUSH SWITCH 20,000 CYCLES MINIMUM.
  - MICROPROCESSOR CONTROLLED, SOLID-STATE RELAY, CURRENT LIMIT SENSE CIRCUIT, REVERSE POLARITY PROTECTED
  - CONFORMS TO SAE J1455:  
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 4.11.1 STEADY-STATE ELECTRICAL CHARACTERISTICS.  
 4.11.2 TRANSIENT, NOISE AND ELECTROSTATIC CHARACTERISTICS.
  - ENVIRONMENTAL EXTREMES BY LOCATION.  
 5.2 INTERIOR-FORWARD.
  - ALL STEEL PARTS PLATED.
  - ALL DIMENSIONS ARE REFERENCE ONLY UNLESS NOTED OTHERWISE.
  - COLE HERSEE PART NUMBER, REVISION, & DATE CODE STAMPED IN WHITE.
  - CONNECTOR: DILL #059074. TERMINALS: DELPHI #12020126, QTY 6

COLOR	FUNCTION
WHITE	MOTOR HIGH SPEED
YELLOW	MOTOR LOW SPEED
BLACK	GROUND (0V)
BROWN	WASHER PUMP
RED	VBB (12V)
BLUE	MOTOR PARK

**Tolerances** Unless otherwise specifically noted, the following are default tolerances:  
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 \* 3-place Decimal Dimensions +/- .005"  
 \* Angular Dimensions +/- 1.0 Deg.  
 \* Metric: Refer to equivalent English Dimension Tolerance  
 >>> NOTE: All tolerances are Non-Cumulative. <<<

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**Special Characteristics:**

- Critical Characteristic, relating to Safety and/or Regulatory Compliance
- Significant Characteristic relating to Process Control (SPC)
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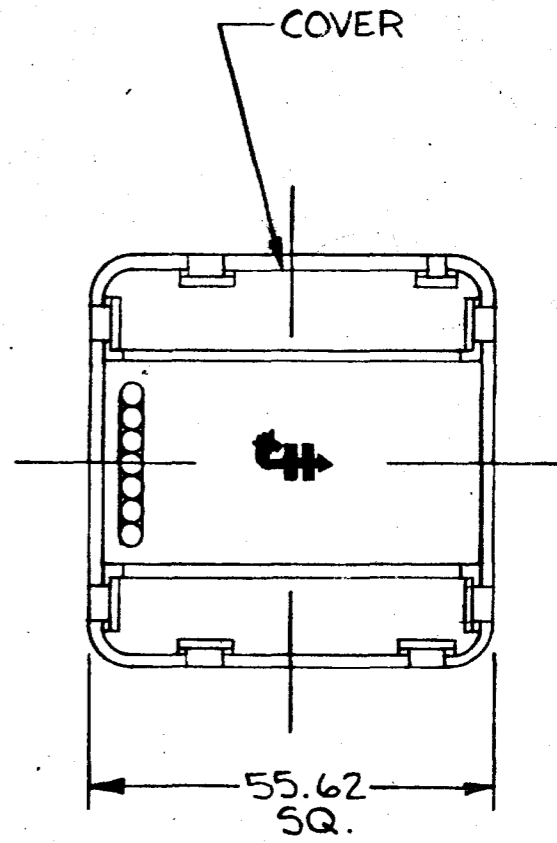
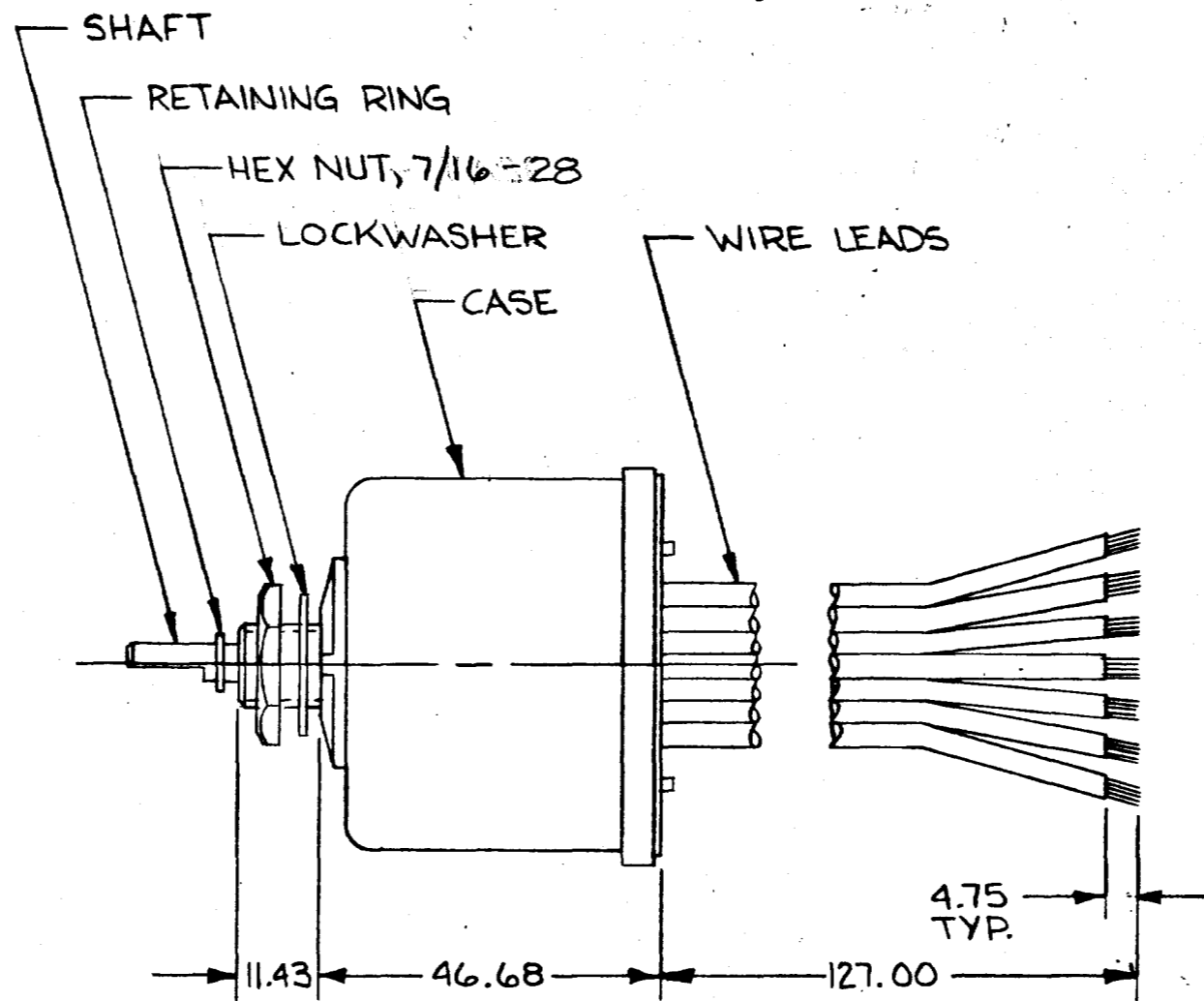
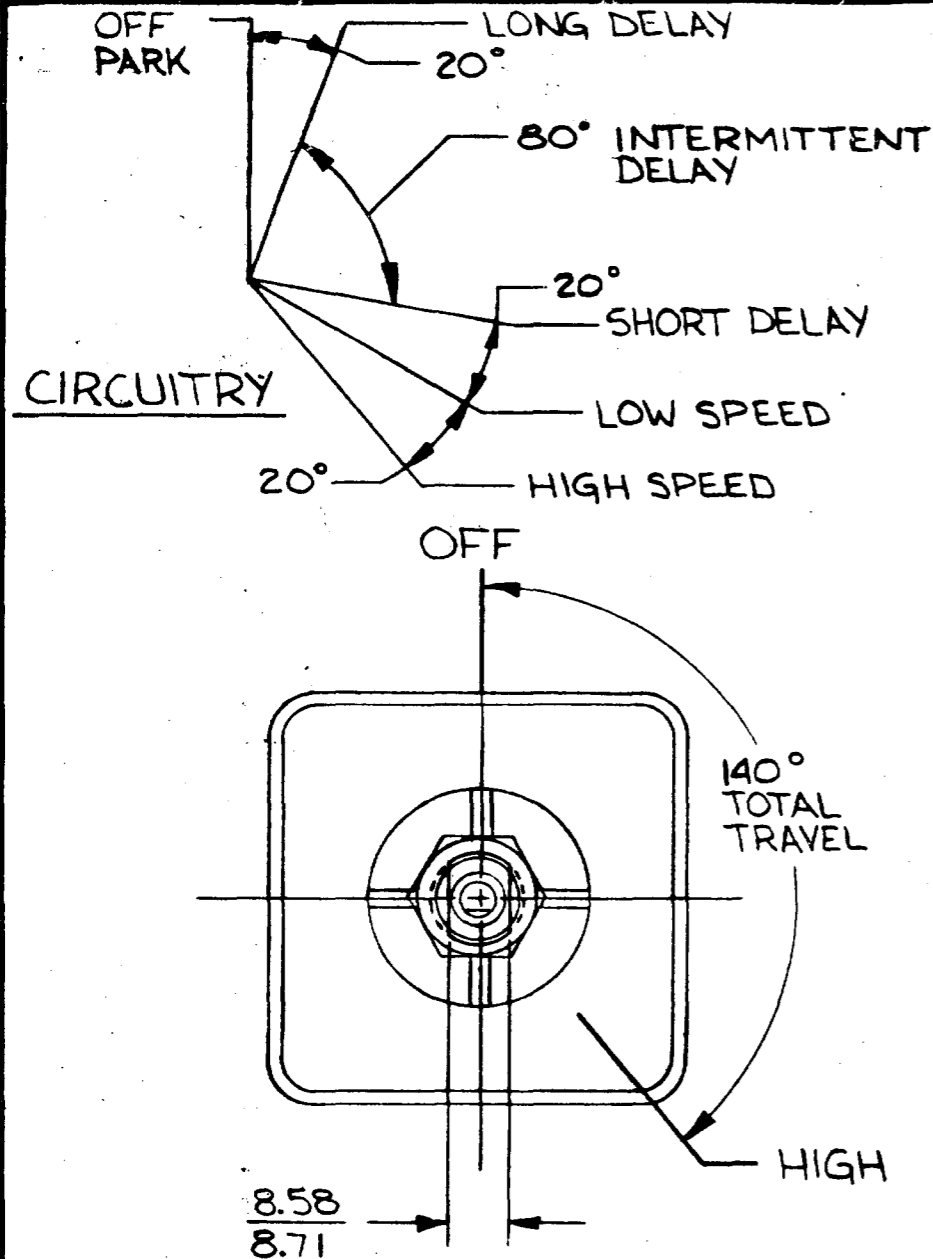
**Description:** WINDSHIELD WIPER & WASHER SW. INTERMITTENT DELAY, 12V.D.C.

**Drawing / Part No.:** 75600-07

**Current Rev.:** J

MM	IN
4.75	.187
8.58	.338
11.43	.452
14.68	.578
27.00	1.063
55.62	2.190
72.00	2.835
0.8 mm <sup>2</sup>	18 GA
2.0 mm <sup>2</sup>	14 GA

75601-06



COLE-HERSEE CO.

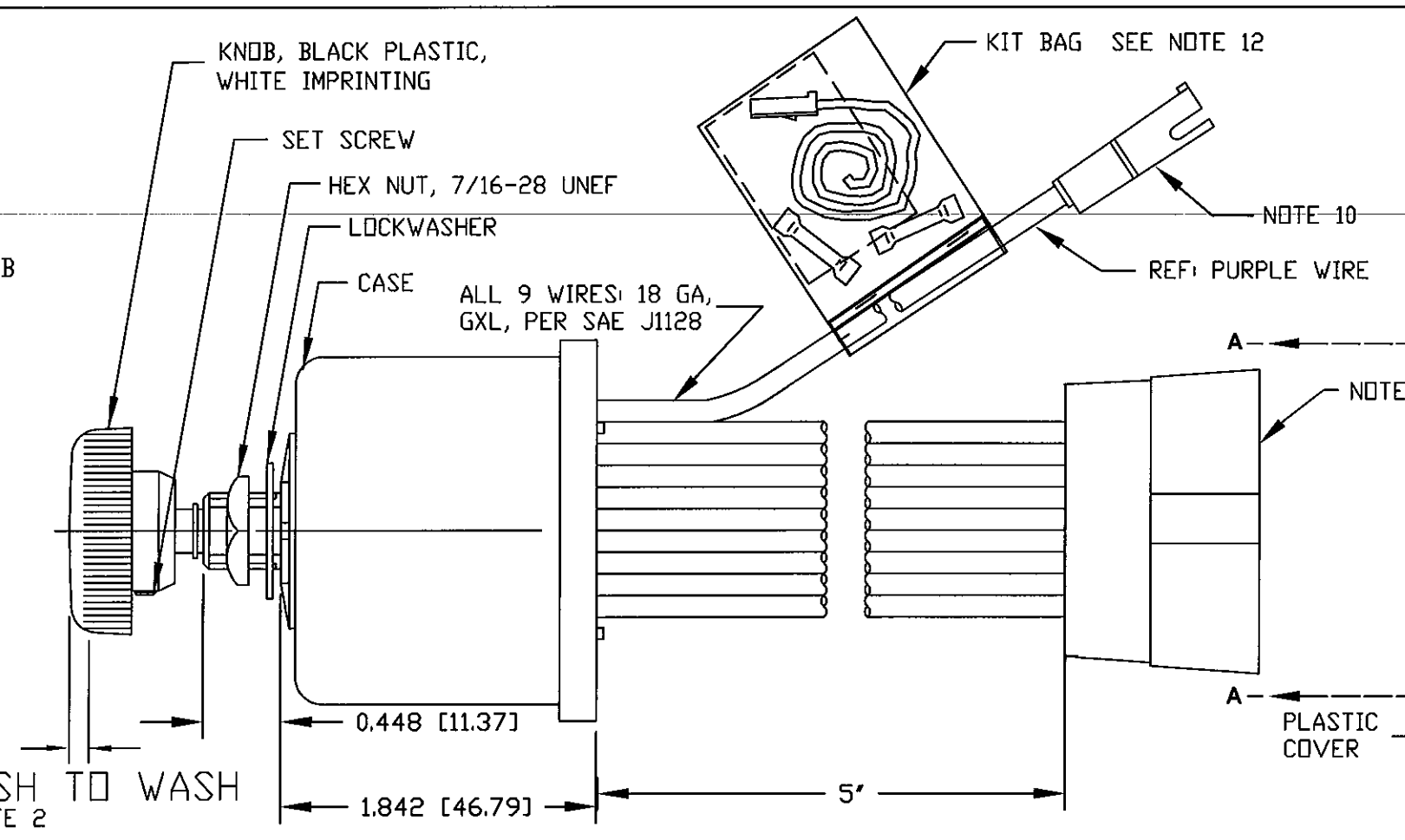
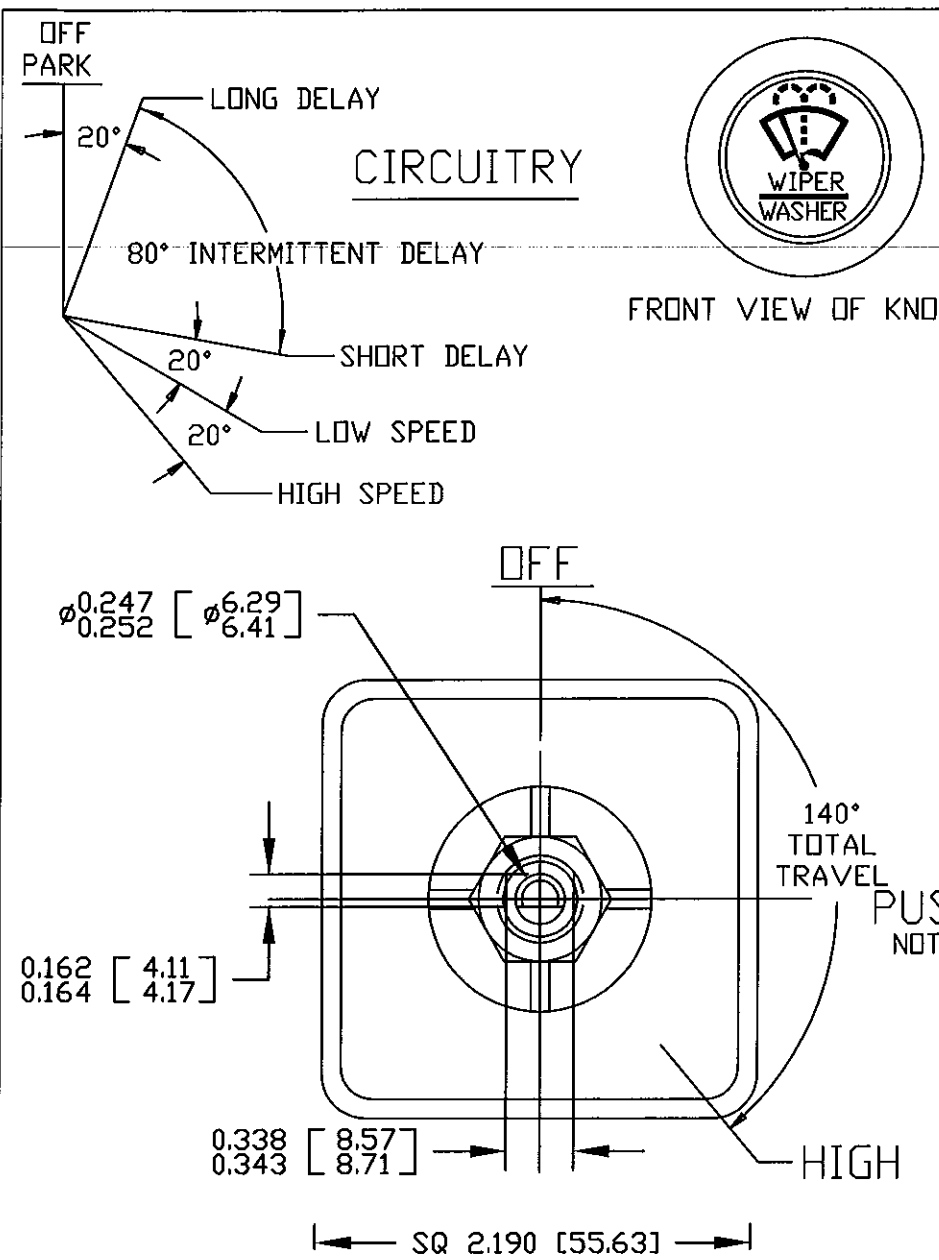
SWITCH CONNECTIONS		
COLOR	WIRE SIZE	CONNECT WIRE TO:
YELLOW	2.0 mm <sup>2</sup> (14 GA)	MOTOR LOW SPEED TERMINAL
WHITE	2.0 mm <sup>2</sup> (14 GA)	MOTOR HIGH SPEED TERMINAL
GREEN	2.0 mm <sup>2</sup> (14 GA)	MOTOR PARK TERMINAL
BLACK	0.8 mm <sup>2</sup> (18 GA)	GROUND (B-) THIS CONNECTION MUST BE MADE
BROWN	0.8 mm <sup>2</sup> (18 GA)	WASHER PUMP (B+ TERMINAL)
RED	2.0 mm <sup>2</sup> (14 GA)	B+ (THESE TWO WIRES MUST BE CONNECTED TOGETHER)
RED	0.8 mm <sup>2</sup> (18 GA)	

NOTES:

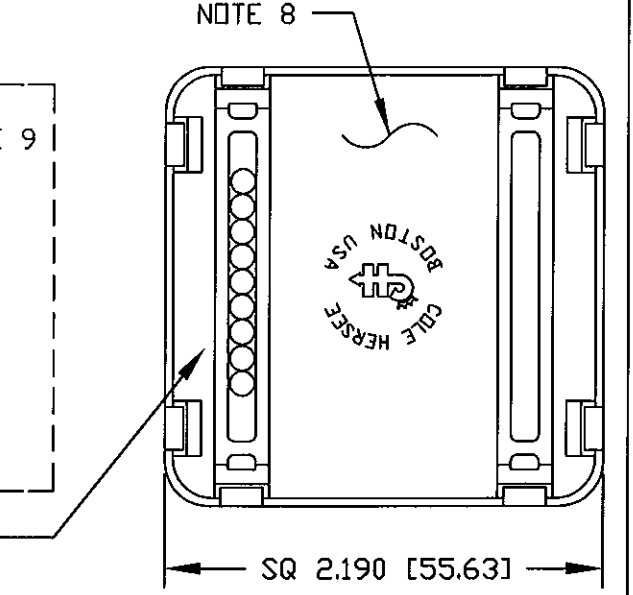
1. PUSH TO WASH, WASHER & WIPER CIRCUIT ACTIVATED (1-3 WIPES AFTER WASHER CIRCUIT IS DEACTIVATED).
2. ALL STEEL PARTS PLATED.
3. ALL DIMENSIONS ARE REF. ONLY.
4. 12 VOLTS D.C.
5. SEPARATE B+ AND GROUND CONNECTIONS MUST BE MADE TO THE WIPER MOTOR.

METRIC

LET.	WAS	DATE	BY	LET.	WAS	DATE	BY	MATERIAL	DRAWN	CHECKED	APPRVD.	SCALE	DATE DRAWN
								#	LZ			1:1	3-18-87
								FINISH	 WINDSHIELDWIPER & WASHER SWITCH PM MOTOR				DATE BLUEPRINT
								TOLERANCES					75601-06
				A	ECN 24882	7-22-81	A	DECIMAL ±					
					ISSUED	3-23-87	A	METRIC ±					

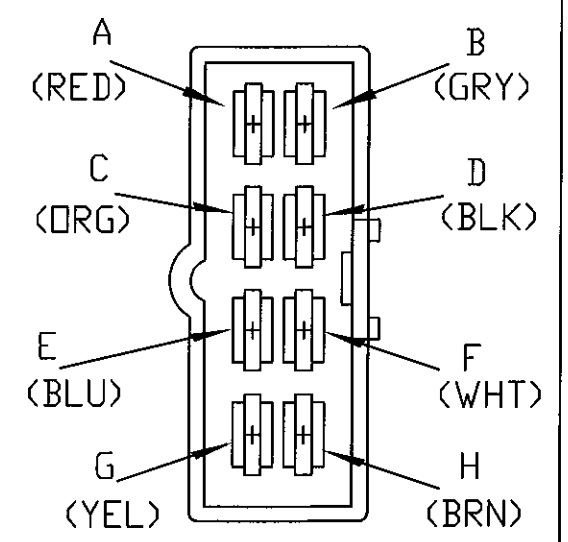


Revision Control Record			
Rev.	Description of Change	ECN No.	Date
A	NEW RELEASE	07475	12/04/07
B	SOFTWARE CHANGE	08085	01/31/08
C	BOM CHANGE	09587	01/13/10



COLOR	FUNCTION	CONNECTOR	TERMINAL
RED	VBB (12V POWER)	8-PIN	A
GREY	HIGH-SPEED MOTOR #2	8-PIN	B
ORANGE	LOW-SPEED MOTOR #2	8-PIN	C
BLACK	GROUND (0V)	8-PIN	D
BLUE	PARK MOTOR #1 (SEE NOTE 11)	8-PIN	E
WHITE	HIGH-SPEED MOTOR#1	8-PIN	F
YELLOW	LOW-SPEED MOTOR #1	8-PIN	G
BROWN	WASHER	8-PIN	H
PURPLE	PARK MOTOR #2 (SEE NOTE 11)	1-PIN	

- NOTES:
- DESIGNED FOR 12V SYSTEM, DUAL MOTOR. MUST BE USED WITH NON-DYNAMIC PARK MOTORS ONLY.
  - PUSH TO WASH FUNCTION RESULTS IN 3 WIPES AFTER RELEASE OF PUSH SWITCH.
  - RATING: VOLTAGE OPERATING RANGE 9VDC TO 16VDC  
 ROTARY SWITCH ACTUATION 20,000 CYCLES MINIMUM.  
 MOTOR DRIVE: 10 AMPS PER MOTOR CONTINUOUS, START-UP/STALL/LOCKED-ROTOR 30 AMPS. SHORT-CIRCUIT PROOF.  
 WASHER CIRCUIT 3 AMPS, PUSH SWITCH 20,000 CYCLES MINIMUM.
  - MICROPROCESSOR CONTROLLED, SOLID-STATE RELAY, CURRENT LIMIT SENSE CIRCUIT, REVERSE POLARITY PROTECTED
  - CONFORMS TO SAE J1455:  
 4.11 GENERAL HEAVY DUTY TRUCK ELECTRICAL ENVIRONMENT.  
 4.11.1 STEADY-STATE ELECTRICAL CHARACTERISTICS.  
 4.11.2 TRANSIENT, NOISE AND ELECTROSTATIC CHARACTERISTICS.
  - INTERMITTENT DELAYS: 1, 2, 4, 7, 11 AND 16 SECONDS
  - ALL DIMENSIONS ARE REFERENCE ONLY UNLESS NOTED OTHERWISE.
  - COLE HERSEE PART NUMBER, REVISION, & DATE CODE STAMPED IN WHITE ON REAR PLASTIC COVER.
  - CONNECTOR, DELPHI: 8-PIN, PART# 2965972 (QTY 1)  
 TERMINALS, DELPHI: 2965439 (QTY 8)
  - CONNECTOR, DELPHI: 1-PIN, PART# 8905650 (QTY 1)  
 TERMINALS, DELPHI: 2965439 (QTY 1)
  - UNIT REQUIRES TWO SEPARATE WIRE CONNECTIONS TO MOTOR PARK SIGNALS.  
 THIS MAY REQUIRE RE-WIRING VEHICLE HARNESS. DO NOT CONNECT PARK WIRES TOGETHER.  
 NOTE THAT 1-PIN CONNECTOR (PURPLE WIRE) IS FOR PARK MOTOR #2.
  - WRAP PLASTIC BAG AROUND SWITCH PURPLE WIRE, FOLD AND STAPLE AS SHOWN.



**Tolerances** Unless otherwise specifically noted, the following are default tolerances:  
 \* 2-place Decimal Dimensions +/- .02"  
 \* 3-place Decimal Dimensions +/- .005"  
 \* Angular Dimensions +/- 1.0 Deg.  
 \* Metric: Refer to equivalent English Dimension Tolerance  
 >>> NOTE: All tolerances are Non-Cumulative. <<<

**Dimensional Units** All dimensions are expressed in inches except those shown in brackets (xxx) are expressed in millimeters

"REF." or an Asterisk (\*) = Non-Toleranced Reference Dimension, shown for clarification purposes only.

Used On or Ref.: **EX28333** Scale: **1:1**

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DO NOT SCALE - Dimensional variation may occur during printing / reproduction.

Drawn **JCS** Date **12/04/07**  
 By: **JCS** Drawn: **12/04/07**

**Special Characteristics:**

- ⊠ Critical Characteristic, relating to Safety and/or Regulatory Compliance
- ⊞ Significant Characteristic relating to Process Control (SPC)
- Ⓚ Control Dimension relating to Form - Fit - Function as defined by Cole Hersee Company and/or the Customer

(Note that the Identification of any Characteristics as being "Special" does not alter the requirement that ALL specified dimensions & tolerances must be met.)

Responsible Engineer: **JCS** Pg. **1**

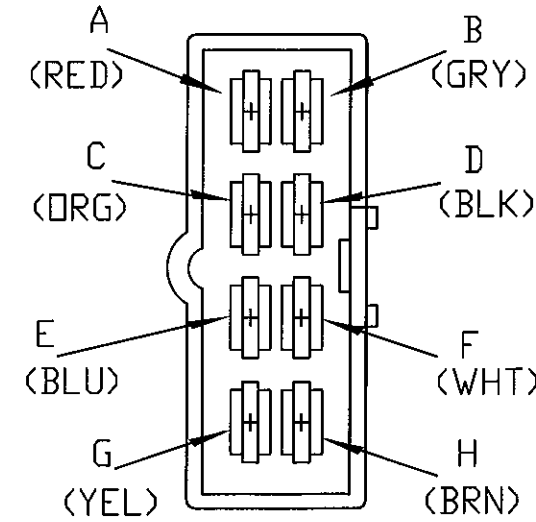
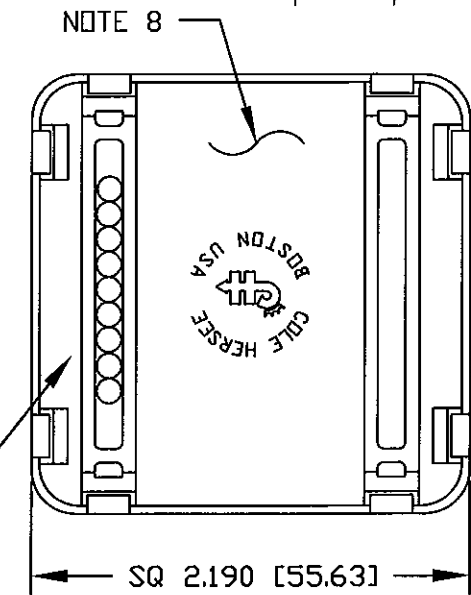
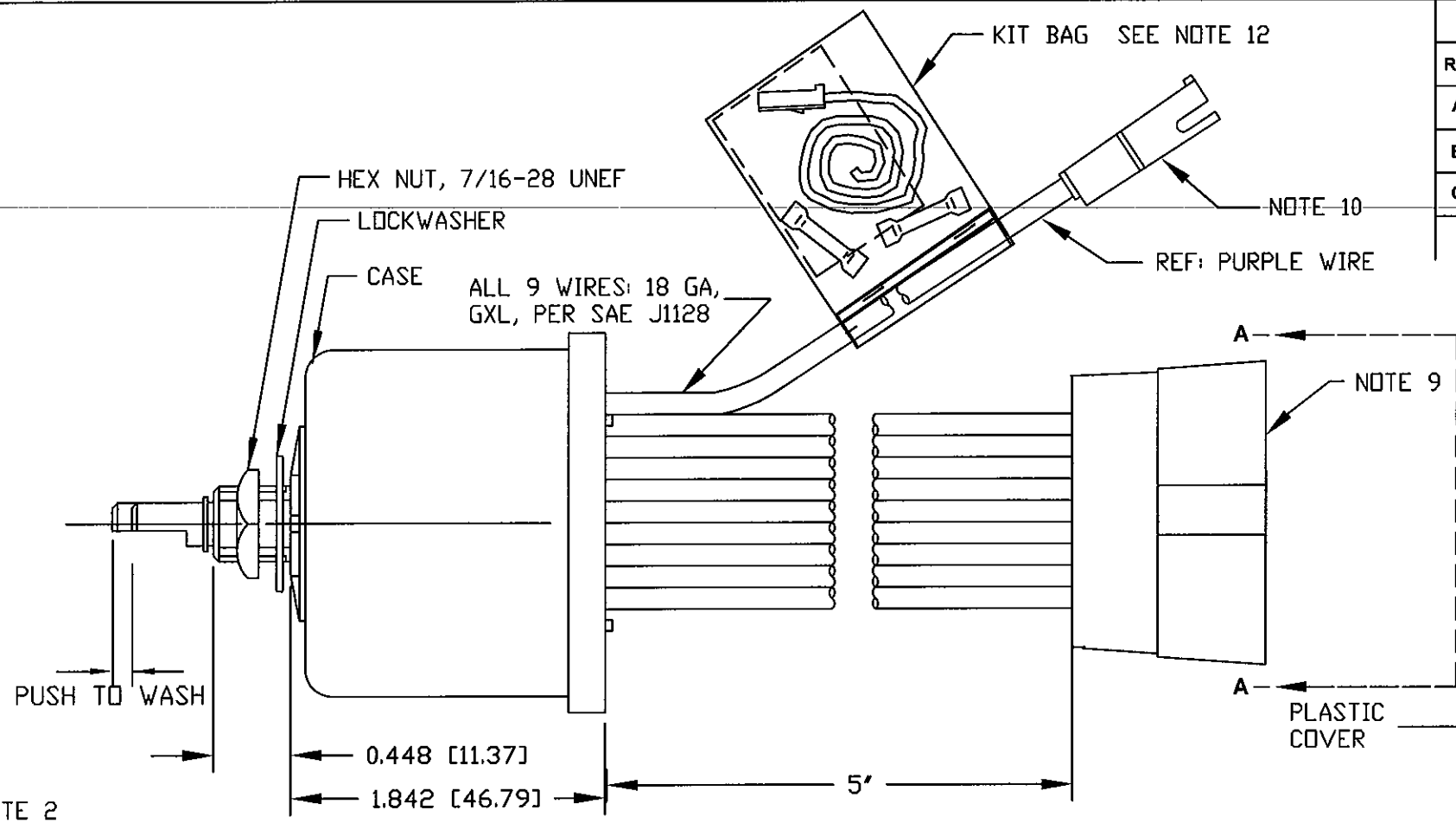
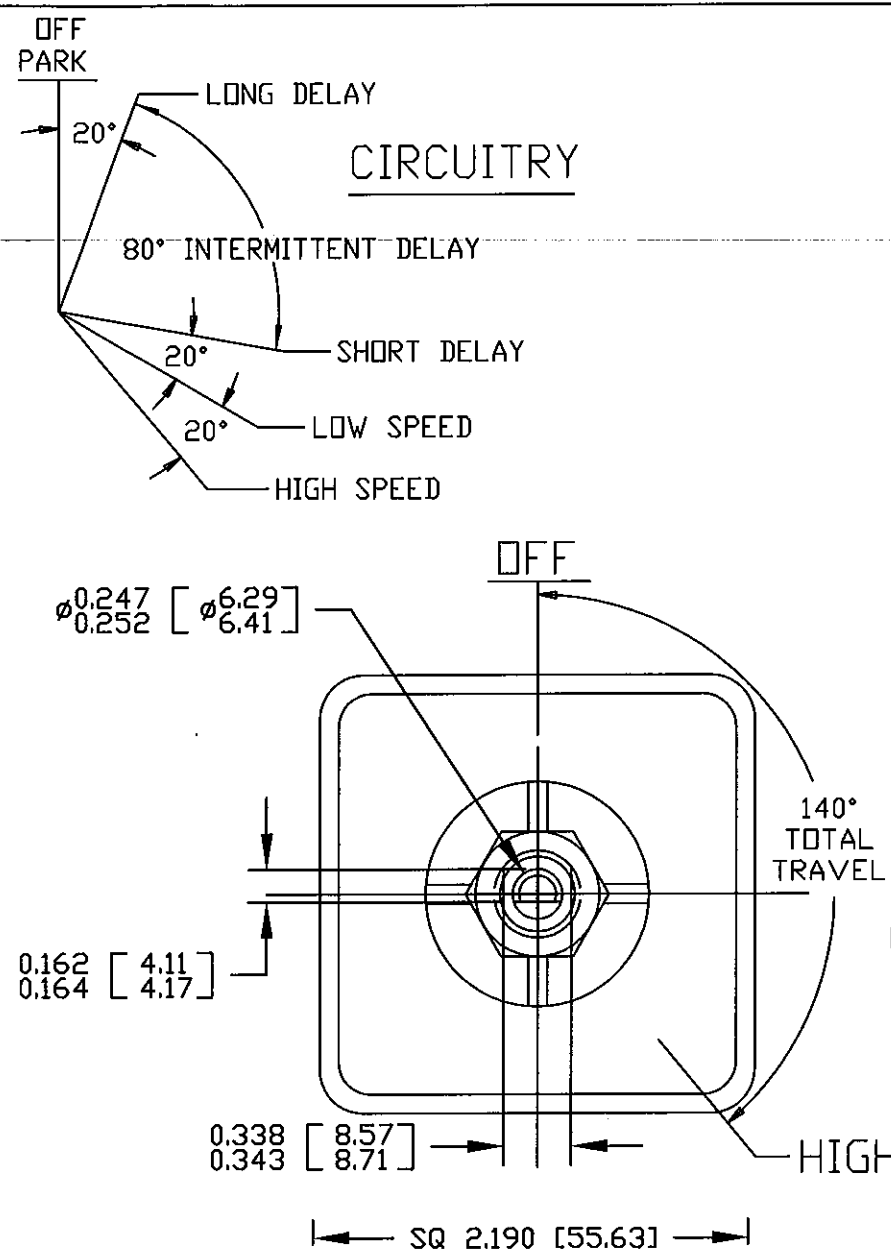
**Cole Hersee Co.**  
 20 Old Colony Ave., South Boston, MA, 02127  
 Phn: 617-268-2100 Web: www.colehersee.com

**Description:**  
**WINDSHIELD WIPER CONTROLLER, DUAL-MOTOR, 12V, SSR, NON-DYNAMIC PARK MOTOR**

Drawing / Part No.: **75601-14** Current Rev. **C**

**Revision Control Record**

Rev.	Description of Change	ECN No.	Date
A	NEW RELEASE	07476	12/04/07
B	PROGRAM SOFTWARE	08085	01/31/08
C	BOM CHANGE	09587	01/13/10



- NOTES:**
- DESIGNED FOR 12V SYSTEM, DUAL MOTOR. MUST BE USED WITH NON-DYNAMIC PARK MOTORS ONLY.
  - PUSH TO WASH FUNCTION RESULTS IN 3 WIPES AFTER RELEASE OF PUSH SWITCH.
  - RATING: VOLTAGE OPERATING RANGE 9VDC TO 16VDC  
 ROTARY SWITCH ACTUATION 20,000 CYCLES MINIMUM.  
 MOTOR DRIVE: 10 AMPS PER MOTOR CONTINUOUS. START-UP/STALL/LOCKED-ROTOR 30 AMPS. SHORT-CIRCUIT PROOF.  
 WASHER CIRCUIT 3 AMPS, PUSH SWITCH 20,000 CYCLES MINIMUM.
  - MICROPROCESSOR CONTROLLED, SOLID-STATE RELAY, CURRENT LIMIT SENSE CIRCUIT, REVERSE POLARITY PROTECTED
  - CONFORMS TO SAE J1455:  
 4.11 GENERAL HEAVY DUTY TRUCK ELECTRICAL ENVIRONMENT.  
 4.11.1 STEADY-STATE ELECTRICAL CHARACTERISTICS.  
 4.11.2 TRANSIENT, NOISE AND ELECTROSTATIC CHARACTERISTICS.
  - INTERMITTENT DELAYS: 1, 2, 4, 7, 11 AND 16 SECONDS
  - ALL DIMENSIONS ARE REFERENCE ONLY UNLESS NOTED OTHERWISE.
  - COLE HERSEE PART NUMBER, REVISION, & DATE CODE STAMPED IN WHITE ON REAR PLASTIC COVER.
  - CONNECTOR, DELPHI: 8-PIN, PART# 2965972 (QTY 1)  
 TERMINALS, DELPHI: 2965439 (QTY 8)
  - CONNECTOR, DELPHI: 1-PIN, PART# 8905650 (QTY 1)  
 TERMINALS, DELPHI: 2965439 (QTY 1)
  - UNIT REQUIRES TWO SEPARATE WIRE CONNECTIONS TO MOTOR PARK SIGNALS.  
 THIS MAY REQUIRE RE-WIRING VEHICLE HARNESS. DO NOT CONNECT PARK WIRES TOGETHER.  
 NOTE THAT 1-PIN CONNECTOR (PURPLE WIRE) IS FOR PARK MOTOR #2.
  - WRAP PLASTIC BAG AROUND SWITCH PURPLE WIRE, FOLD AND STAPLE AS SHOWN.

COLOR	FUNCTION	CONNECTOR	TERMINAL
RED	VBB (12V POWER)	8-PIN	A
GREY	HIGH-SPEED MOTOR #2	8-PIN	B
ORANGE	LOW-SPEED MOTOR #2	8-PIN	C
BLACK	GROUND (0V)	8-PIN	D
BLUE	PARK MOTOR #1 (SEE NOTE 11)	8-PIN	E
WHITE	HIGH-SPEED MOTOR#1	8-PIN	F
YELLOW	LOW-SPEED MOTOR #1	8-PIN	G
BROWN	WASHER	8-PIN	H
PURPLE	PARK MOTOR #2 (SEE NOTE 11)	1-PIN	

**Tolerances** Unless otherwise specifically noted, the following are default tolerances:  
 \* 2-place Decimal Dimensions +/- .02"  
 \* 3-place Decimal Dimensions +/- .005"  
 \* Angular Dimensions +/- 1.0 Deg.  
 \* Metric: Refer to equivalent English Dimension Tolerance  
 >>> NOTE: All tolerances are Non-Cumulative. <<<

**Dimensional Units** All dimensions are expressed in inches except those shown in brackets (xxx) are expressed in millimeters

"REF." or an Asterisk (\*) = Non-Toleranced Reference Dimension, shown for clarification purposes only.

Used On: **EX28333** Scale: **1:1**

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Drawn By: **JCS** Date Drawn: **12/04/07**

**Special Characteristics:**

- Critical Characteristic, relating to Safety and/or Regulatory Compliance
- Significant Characteristic relating to Process Control (SPC)
- Control Dimension relating to Form - Fit - Function as defined by Cole Hersee Company and/or the Customer

(Note that the Identification of any Characteristics as being "Special" does not alter the requirement that ALL specified dimensions & tolerances must be met.)

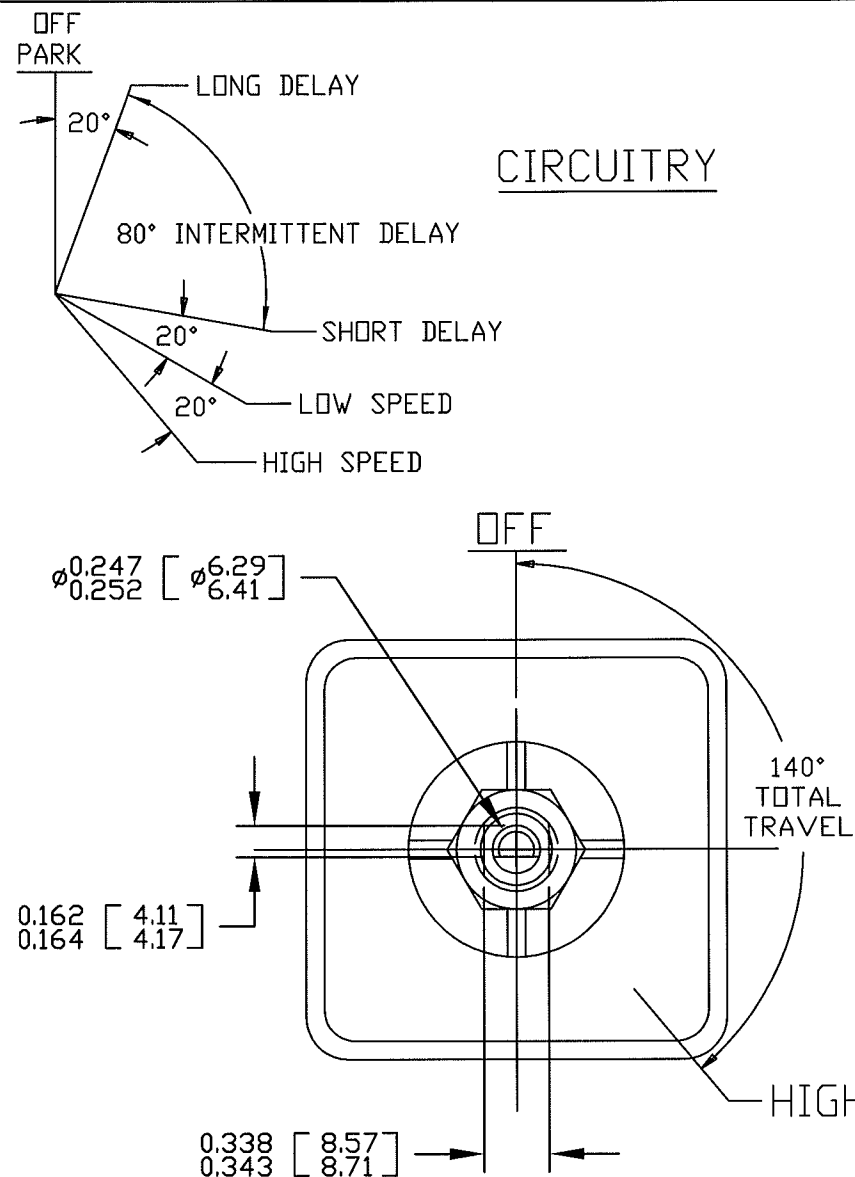
Responsible Engineer: **JCS** Pg. **1**

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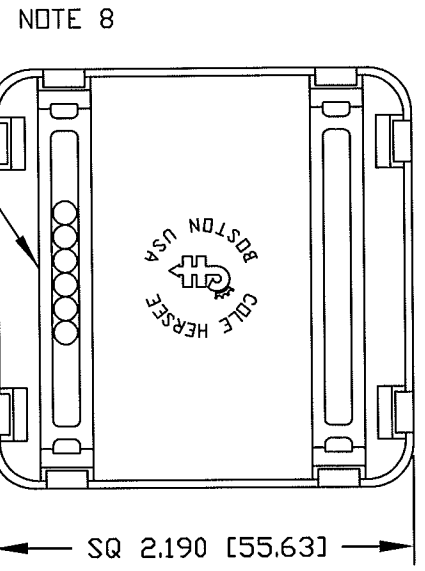
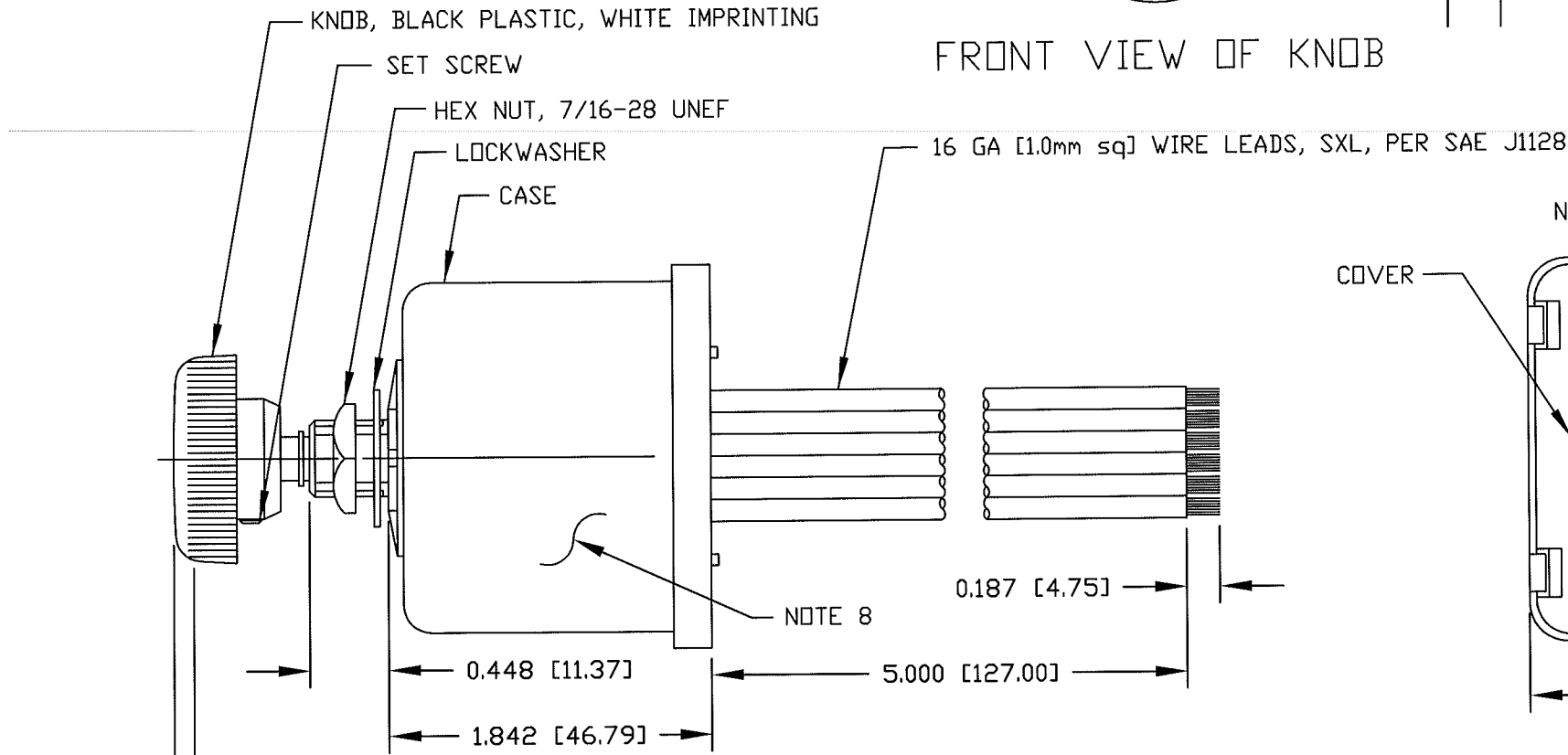
**Description:**  
**WINDSHIELD WIPER CONTROLLER, DUAL-MOTOR, 12V, SSR, NON-DYNAMIC PARK MOTOR**

Drawing / Part No.: **75601-15** Current Rev.: **C**





Revision Control Record			
Rev.	Description of Change	ECN No.	Date
H	BOM CHANGE	09588	01/18/10
J	CHANGE NOTE 3	13055	02/07/13



PUSH TO WASH  
NOTE 2

- NOTES:
- DESIGNED FOR 24V SYSTEM, SINGLE MOTOR, DYNAMIC AND NON-DYNAMIC PARK. TO BE USED WITH PERMANENT MAGNET MOTOR, NEGATIVE GROUND ONLY.
  - PUSH TO WASH FUNCTION: RESULTS IN 2 TO 3 WIPES AFTER RELEASE OF PUSH SWITCH.
  - RATING: VOLTAGE OPERATING RANGE 18VDC TO 32VDC  
ROTARY SWITCH ACTUATION 20,000 CYCLES MINIMUM.  
MOTOR DRIVE: 15 AMPS CONTINUOUS, START-UP/STALL/LOCKED-ROTOR 50 AMPS. SHORT-CIRCUIT PROTECTED.  
WASHER CIRCUIT 3 AMPS, PUSH SWITCH 20,000 CYCLES MINIMUM.
  - MICROPROCESSOR CONTROLLED, SOLID-STATE RELAY, CURRENT LIMIT SENSE CIRCUIT, REVERSE POLARITY PROTECTED
  - CONFORMS TO SAE J1455:  
4.11 GENERAL HEAVY DUTY TRUCK ELECTRICAL ENVIRONMENT.  
4.11.1 STEADY-STATE ELECTRICAL CHARACTERISTICS.  
4.11.2 TRANSIENT, NOISE AND ELECTROSTATIC CHARACTERISTICS.
  - ENVIRONMENTAL EXTREMES BY LOCATION.  
5.2 INTERIOR-FORWARD.
  - ALL STEEL PARTS PLATED.
  - ALL DIMENSIONS ARE REFERENCE ONLY UNLESS NOTED OTHERWISE.
  - COLE HERSEE PART NUMBER, REVISION, & DATE CODE MARKED AT RANDOM ON CASE.

COLOR	CONNECT WIRE TO:
YELLOW	MOTOR LOW SPEED TERMINAL
WHITE	MOTOR HIGH SPEED TERMINAL
BLUE	MOTOR PARK TERMINAL
BLACK	GROUND (B-) THIS CONNECTION MUST BE MADE
BROWN	WASHER PUMP (B+ TERMINAL)
RED	B+

SEPARATE B+ AND GROUND CONNECTIONS MUST BE MADE TO THE WIPER MOTOR

**Tolerances** Unless otherwise specifically noted, the following are default tolerances:  
 \* 2-place Decimal Dimensions +/- .02"  
 \* 3-place Decimal Dimensions +/- .005"  
 \* Angular Dimensions +/- 1.0 Deg.  
 \* Metric: Refer to equivalent English Dimension Tolerance  
 >>> NOTE: All tolerances are Non-Cumulative. <<<

**Dimensional Units** All dimensions are expressed in inches except those shown in brackets (xxx) are expressed in millimeters

"REF." or an Asterisk (\*) = Non-Toleranced Reference Dimension, shown for clarification purposes only.

Used On or Ref.: **EX-26548** Scale: **1:1**

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DO NOT SCALE - Dimensional variation may occur during printing / reproduction.

Drawn By: **ZU** Date Drawn: **03/13/87**

**Special Characteristics:**

- Critical Characteristic, relating to Safety and/or Regulatory Compliance
- Significant Characteristic relating to Process Control (SPC)
- Control Dimension relating to Form - Fit - Function as defined by Cole Hersee Company and/or the Customer

(Note that the identification of any Characteristics as being "Special" does not alter the requirement that ALL specified dimensions & tolerances must be met.)

Responsible Engineer: **Pg. 1**

**Cole Hersee Co.**  
 20 Old Colony Ave., South Boston, MA, 02127  
 Phn: 617-268-2100 Web: www.colehersee.com

Description: **WINDSHIELD WIPER & WASHER SW. INTERMITTENT DELAY, 24V.D.C.**

Drawing / Part No.: **75602-04** Current Rev.: **J**



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.