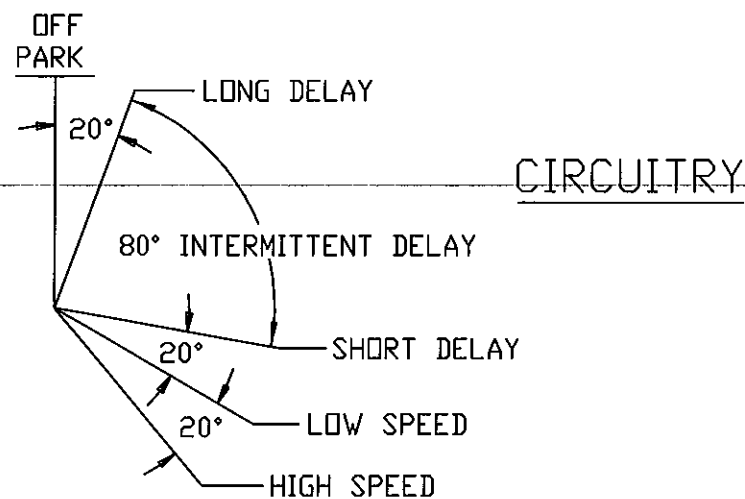
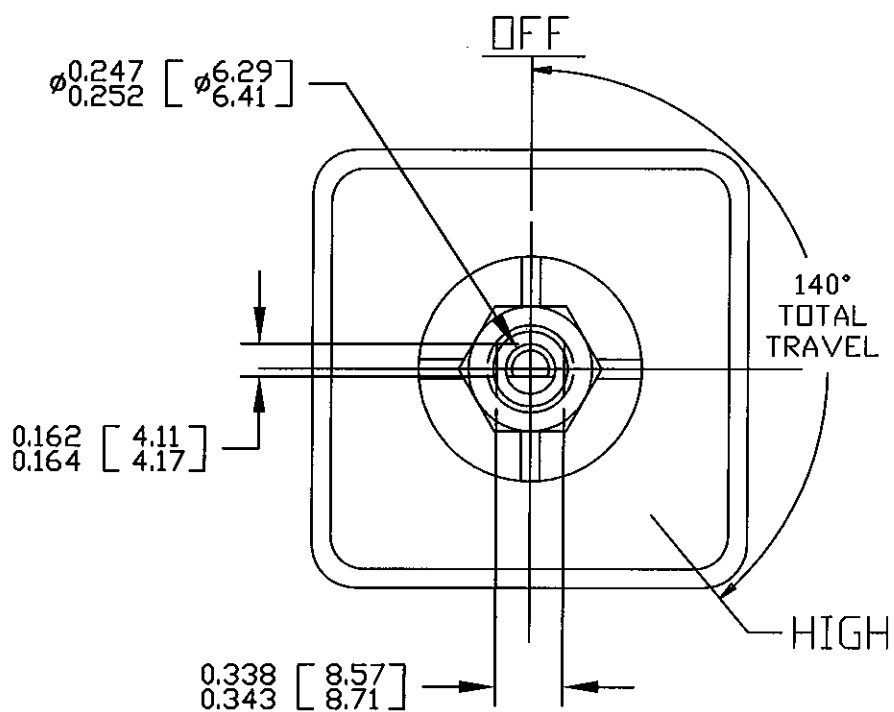


**Revision Control Record**

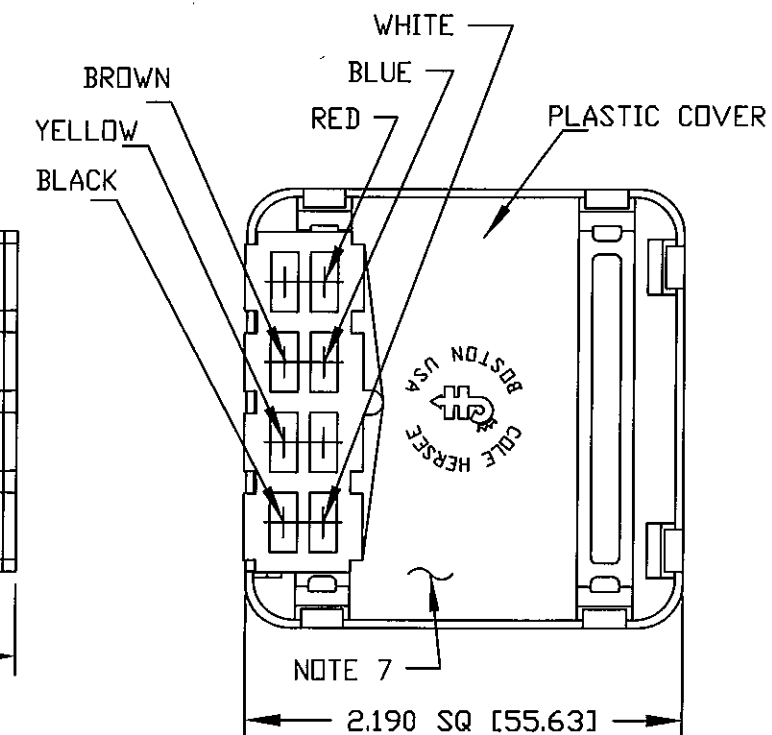
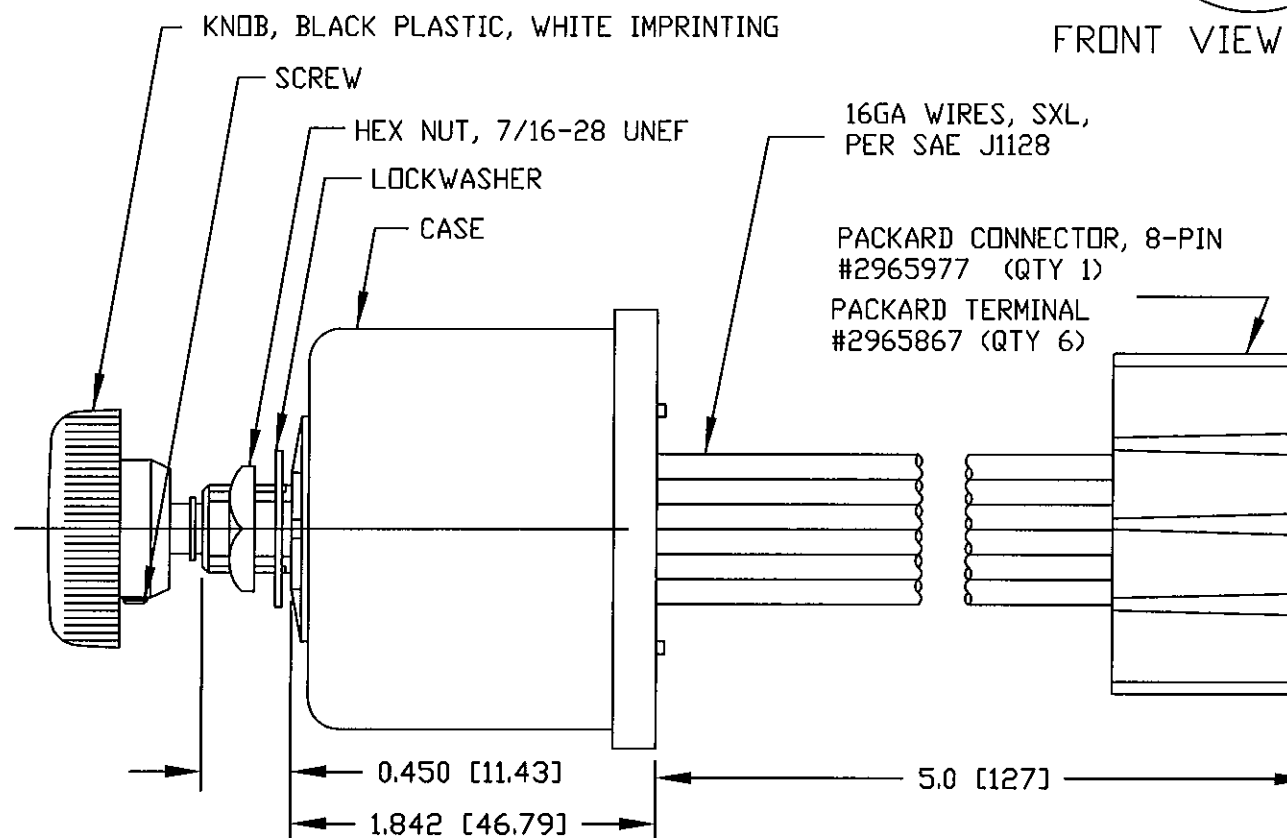
| Rev. | Description of Change | ECN No. | Date     |
|------|-----------------------|---------|----------|
| E    | REVISED DRAWING, SSR  | 07035   | 1/25/07  |
| F    | BOM CHANGE            | 09588   | 01/15/10 |



**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:  
 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. <<<

**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.

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

**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.)

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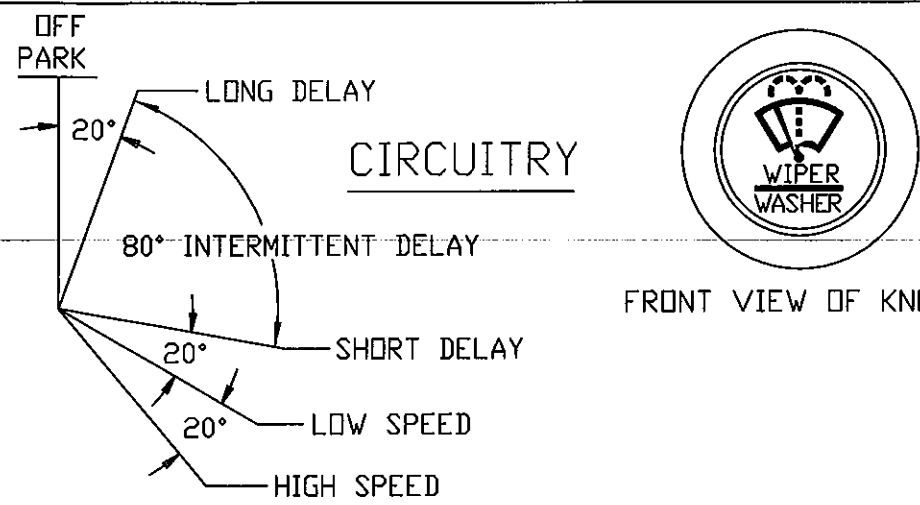
**Description:** WINDSHIELD WIPER CONTROLLER, UNIVERSAL, 12V

**Drawing / Part No.:** 75600

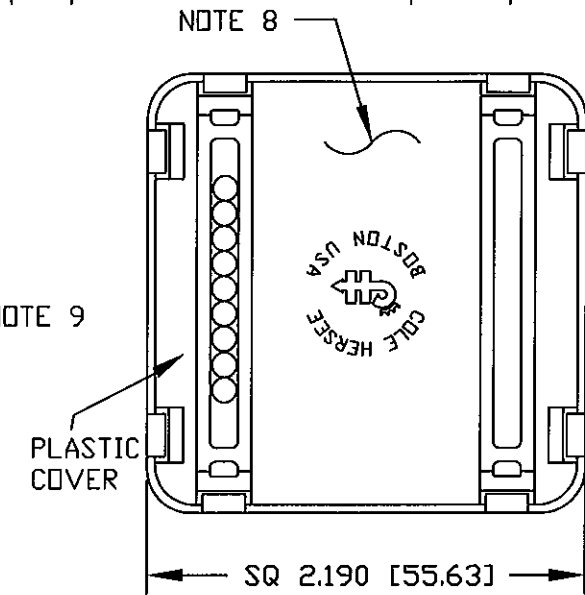
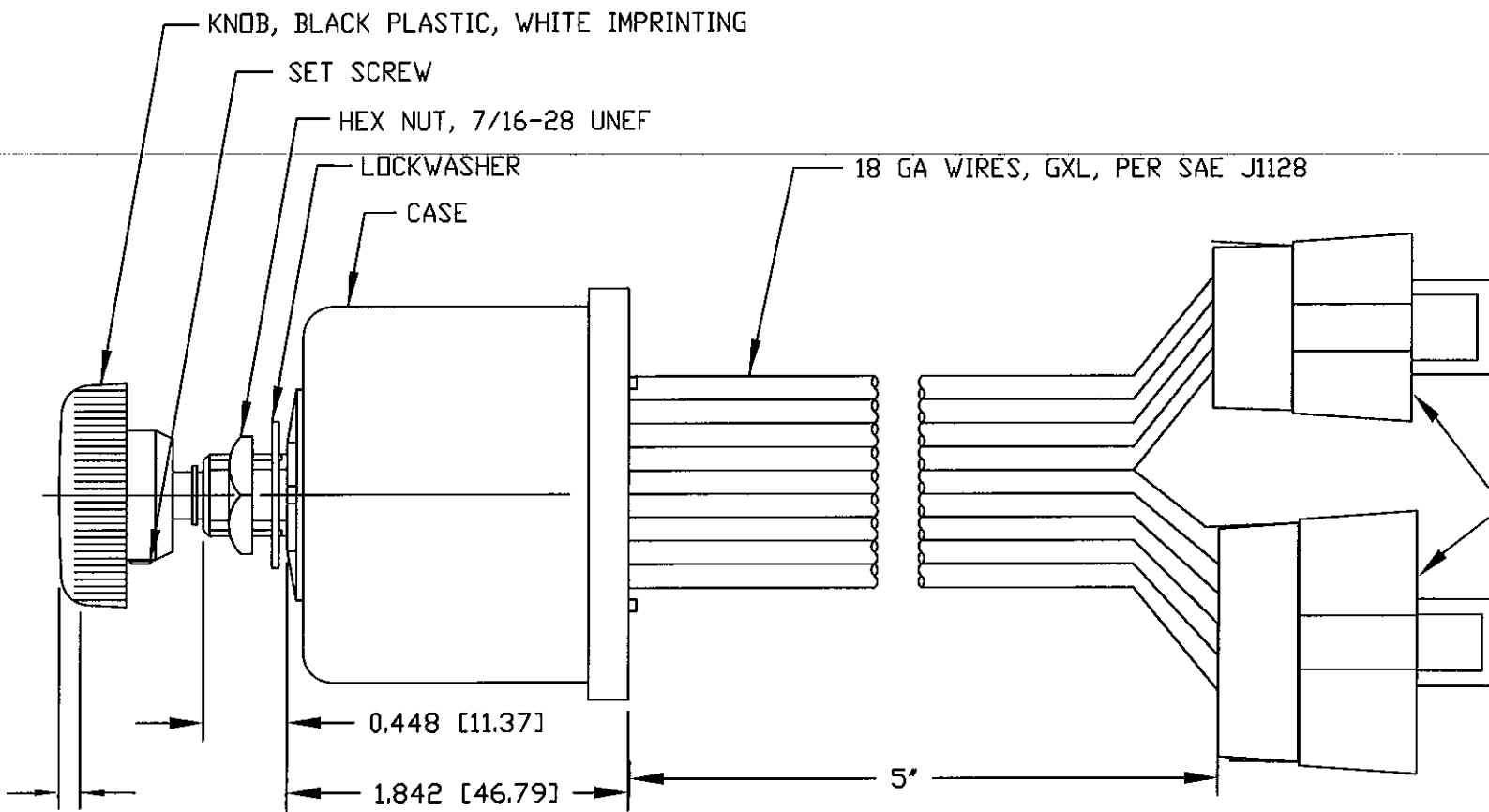
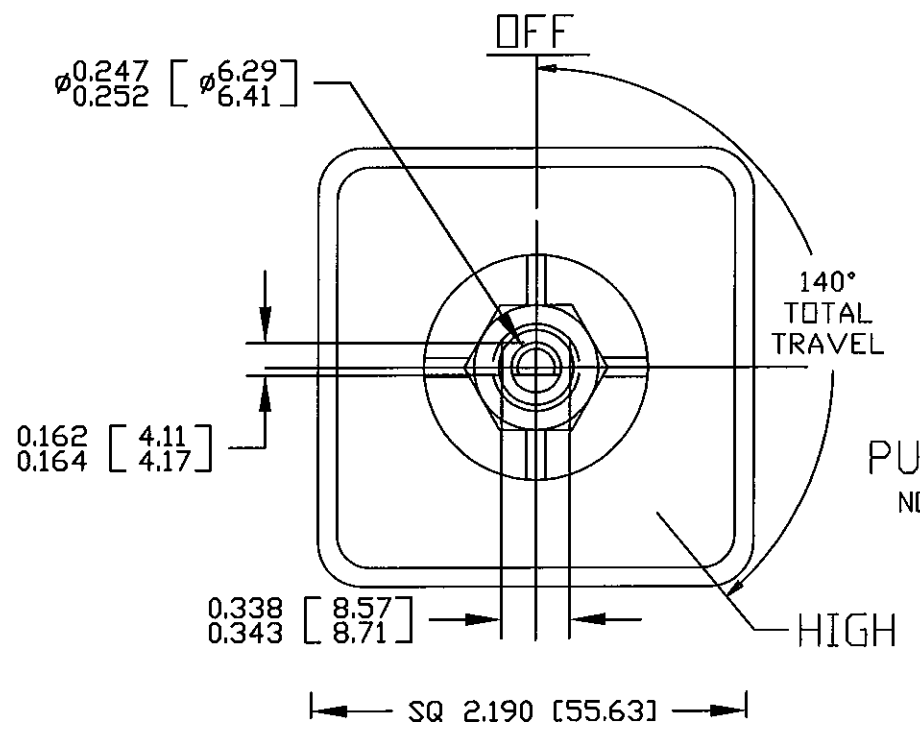
**Current Rev.:** F

**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 |

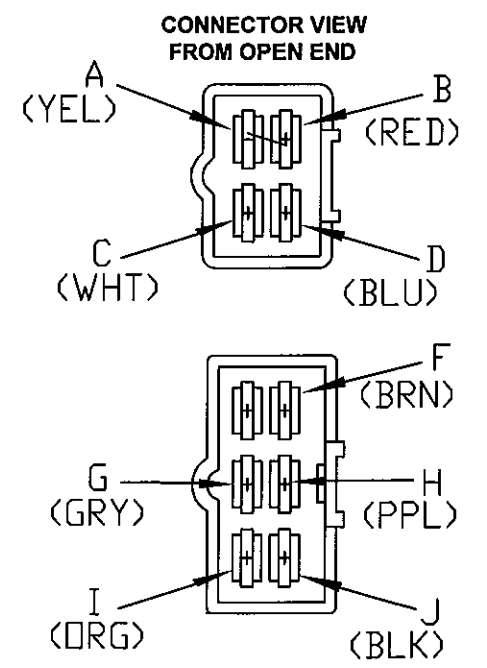


FRONT VIEW OF KNOB



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-Toleranced Reference Dimension, shown for clarification purposes only.

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

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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.)

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

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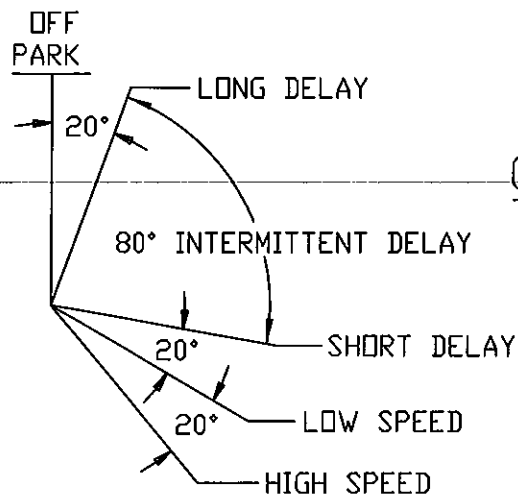
**Description:**  
**WINDSHIELD WIPER CONTROLLER, DUAL-MOTOR, W/ WIPER ENABLE, 12V, SSR**

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

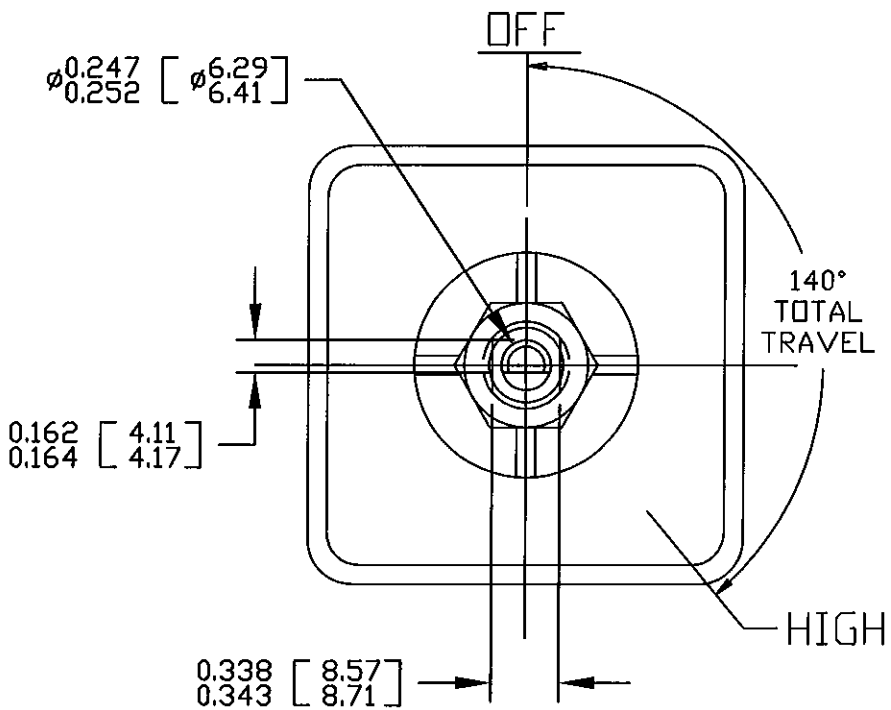


**Revision Control Record**

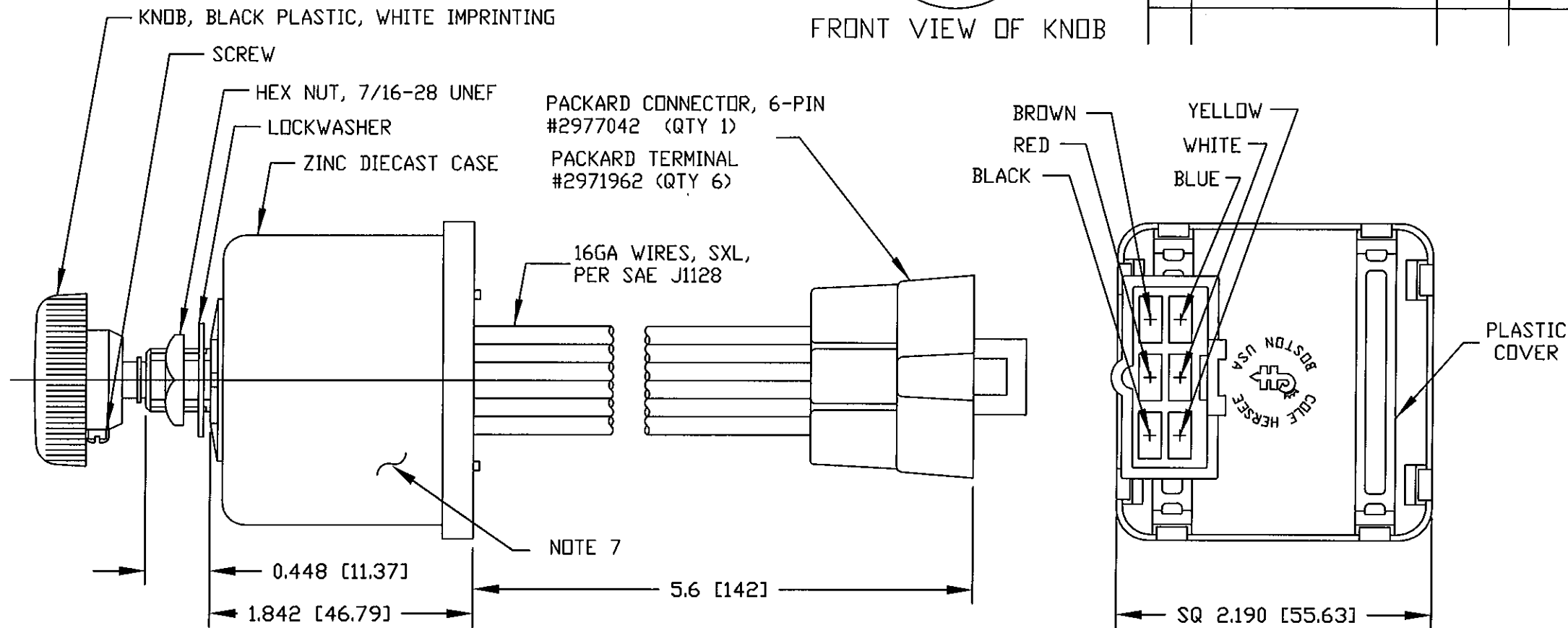
| Rev. | Description of Change | ECN No. | Date     |
|------|-----------------------|---------|----------|
| L    | REVISED DRAWING, SSR  | 07035   | 1/24/07  |
| M    | EDIT NOTE 7           | 09257   | 04/21/09 |
| N    | BOM CHANGE            | 09588   | 01/15/10 |



**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

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

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

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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**

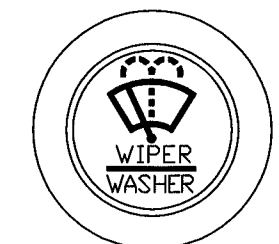
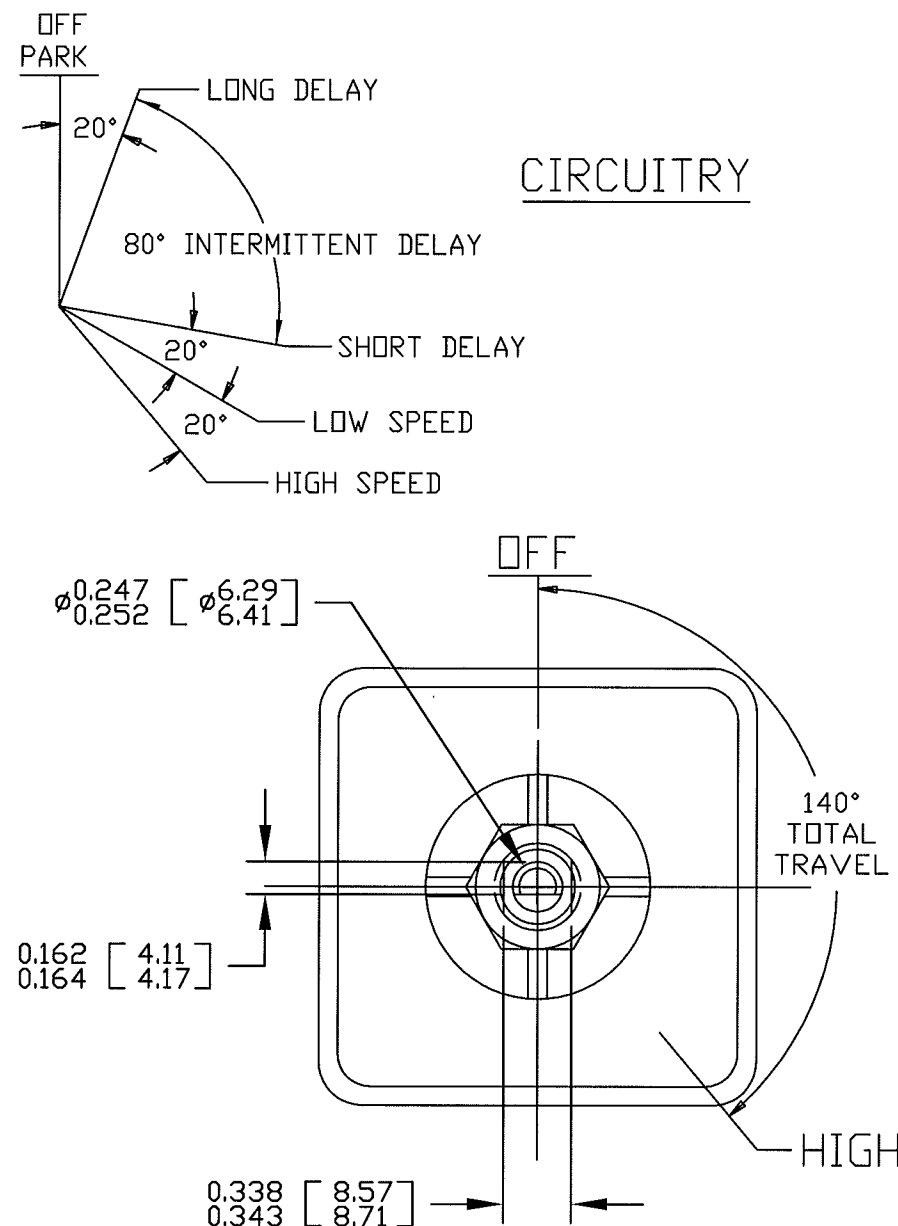
**Cole Hersee Co.**  
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 Phn: 617-268-2100 Web: www.colehersee.com

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

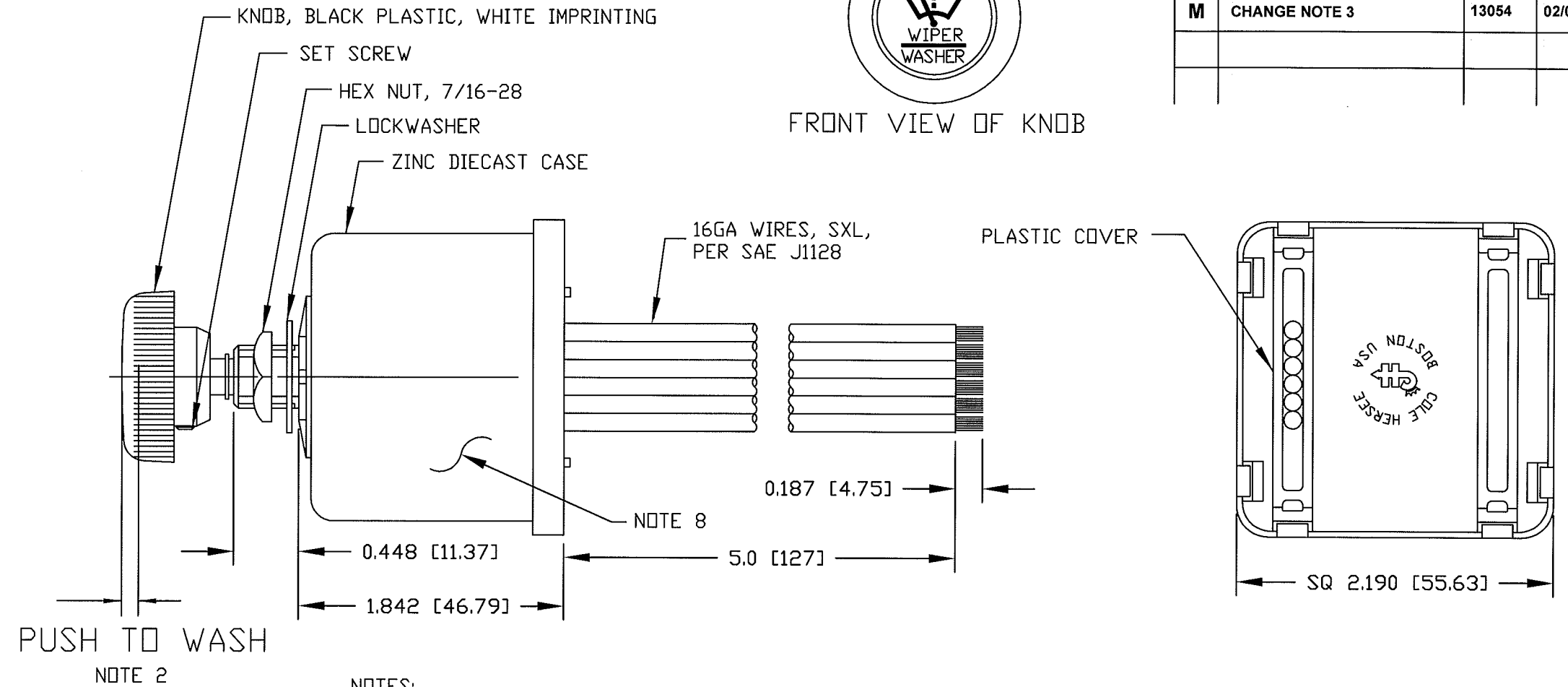
**Drawing / Part No.:** **75600-02** **Current Rev.:** **N**

**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 (M)  
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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Drawn By: **JCS** Date Drawn: **1/9/07**

**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**

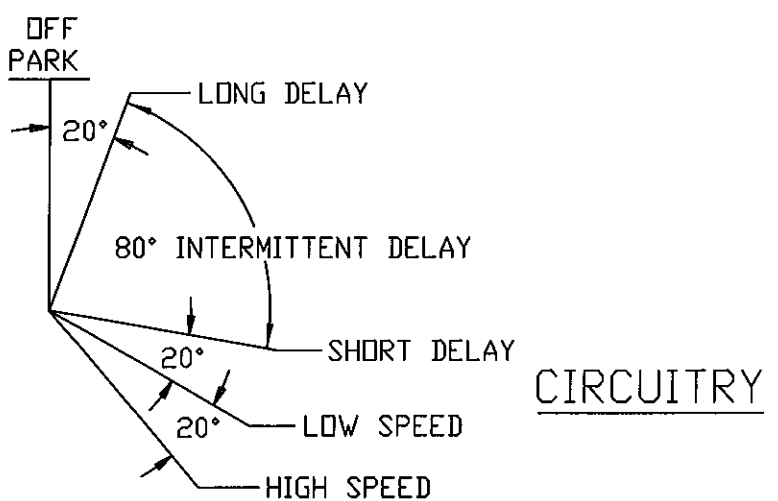
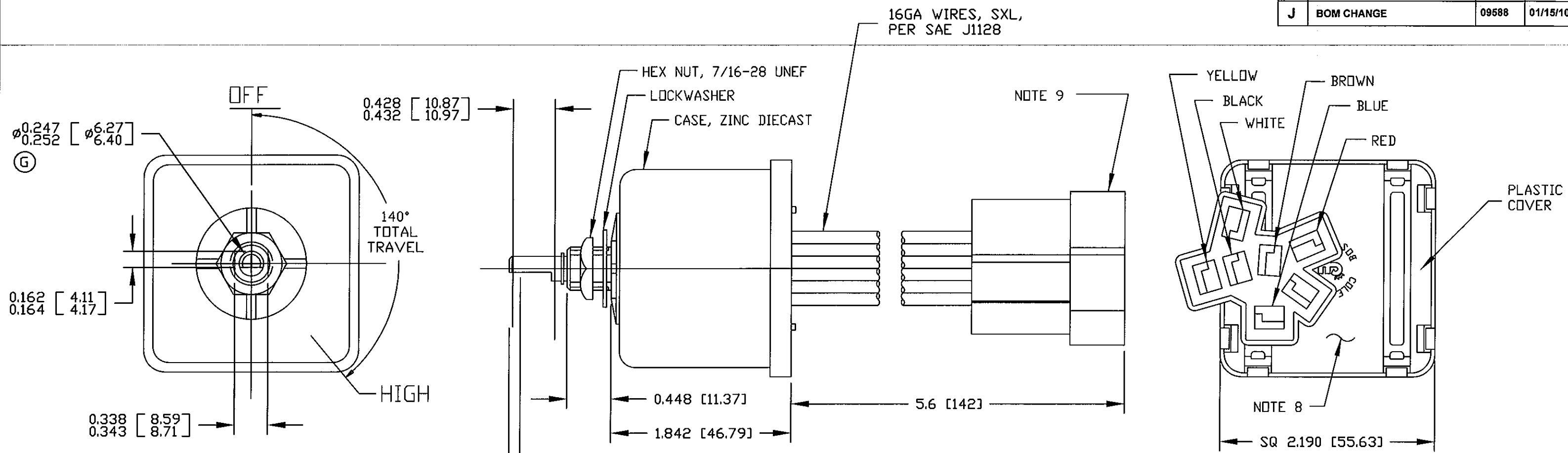
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 Phn: 617-268-2100 Web: www.colehersee.com

**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:
- 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 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:  
 • 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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- 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.)

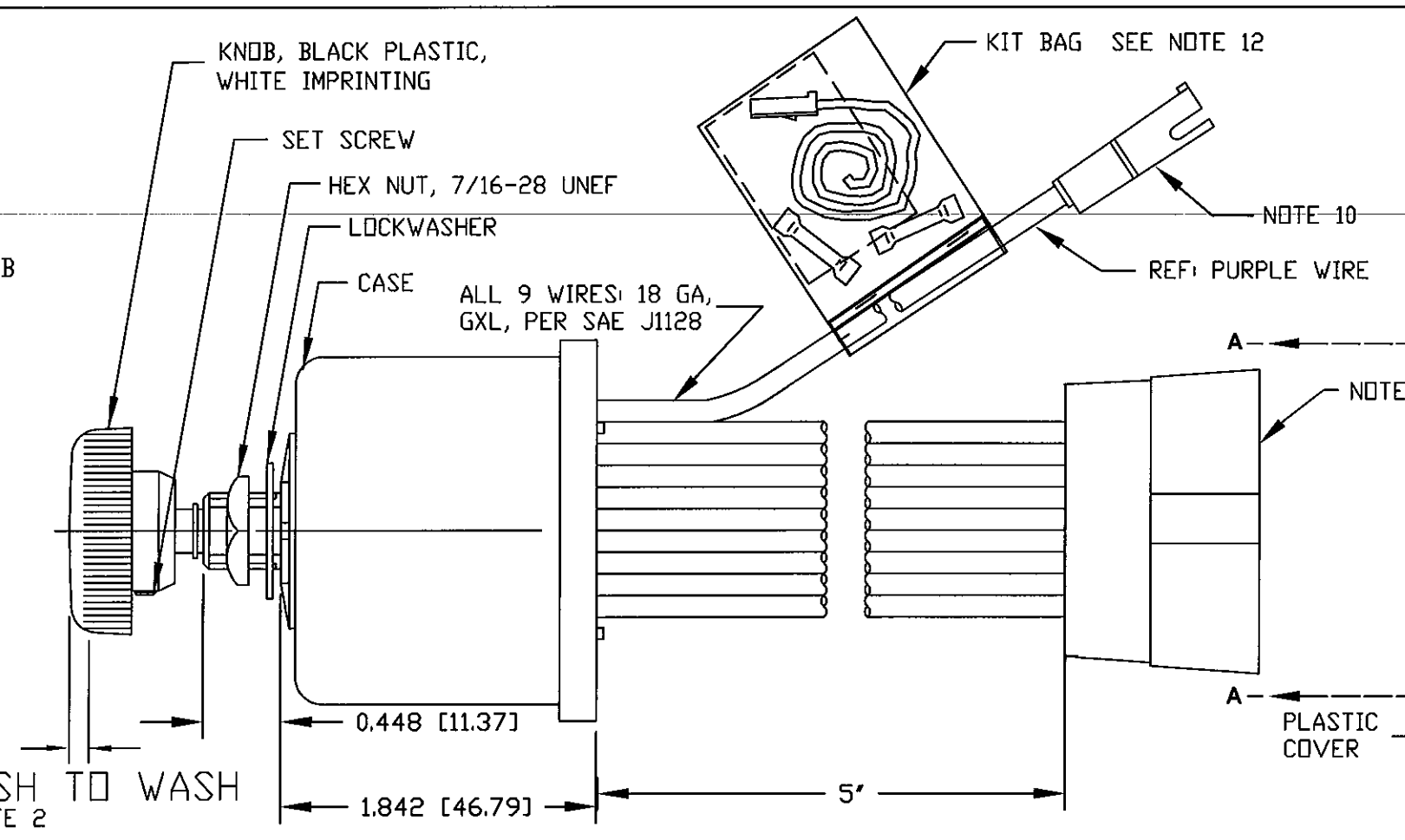
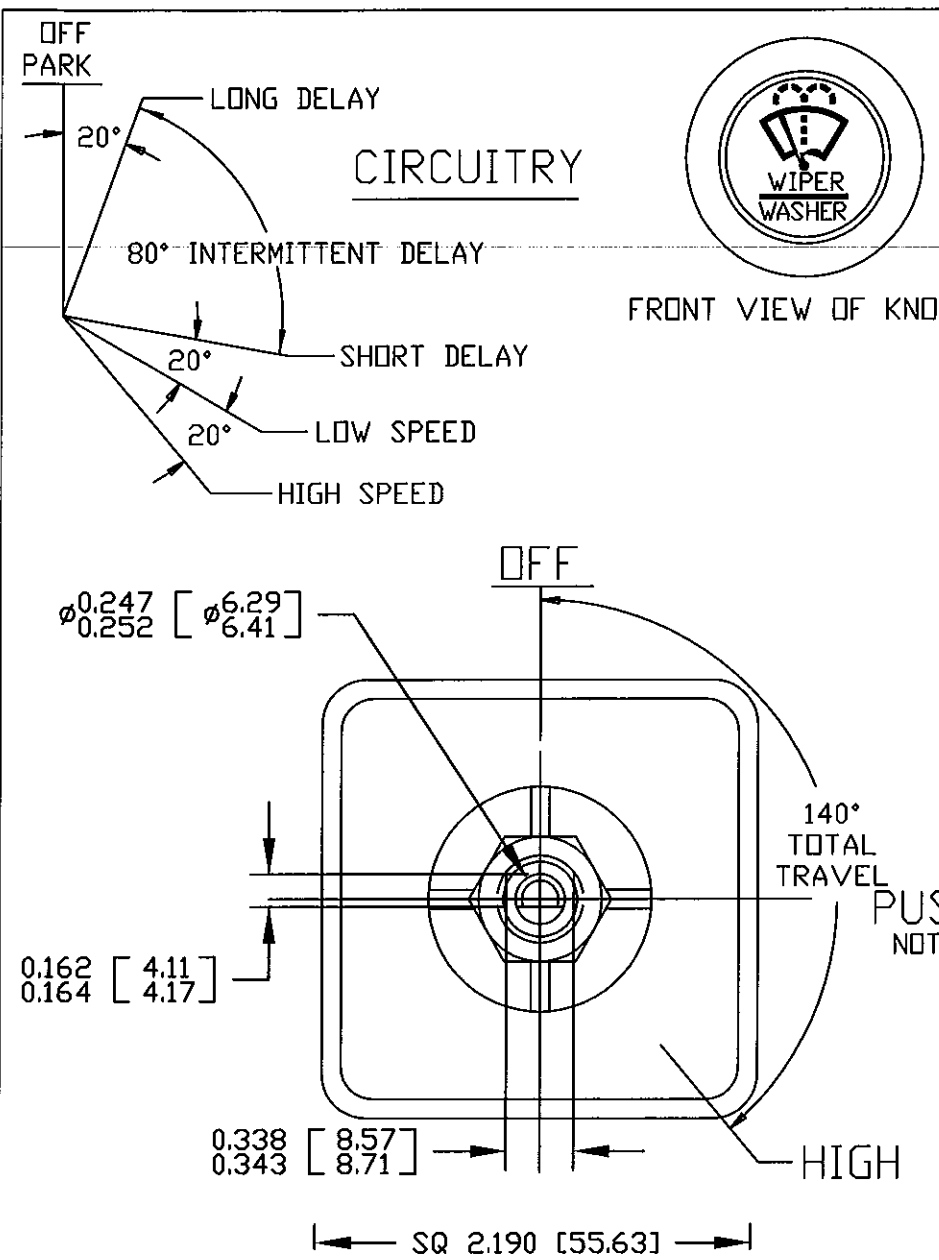
**Cole Hersee Co.**  
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 Phn: 617-268-2100 Web: www.colehersee.com

**Description:** WINDSHIELD WIPER & WASHER SW. INTERMITTENT DELAY, 12V.D.C.

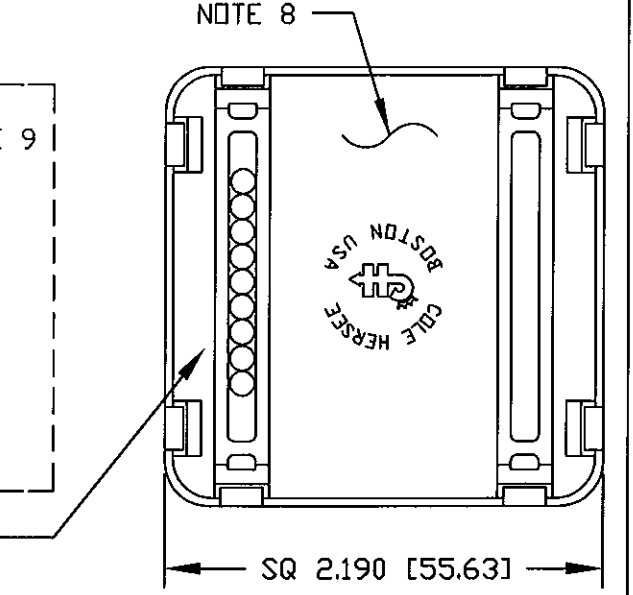
**Drawing / Part No.:** 75600-07

**Current Rev.:** J



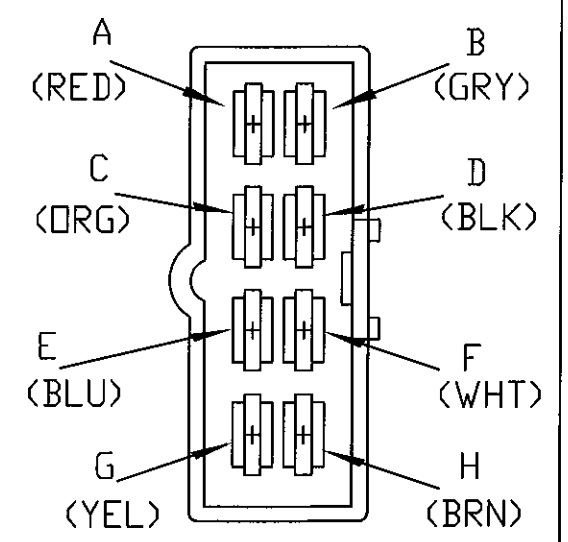


| Revision Control Record |                       |         |          |
|-------------------------|-----------------------|---------|----------|
| Rev.                    | Description of Change | ECN No. | Date     |
| A                       | NEW RELEASE           | 07475   | 12/04/07 |
| B                       | 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** 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**

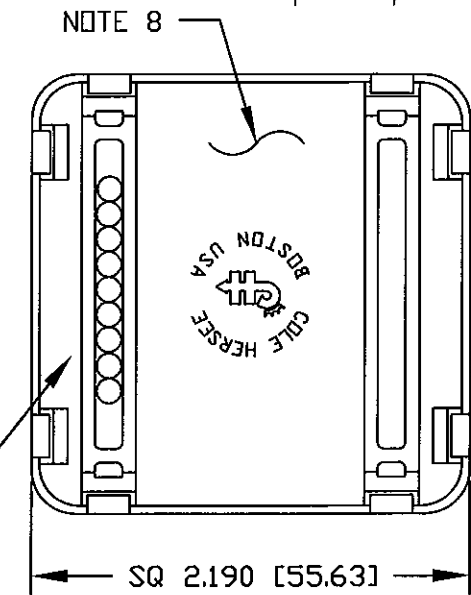
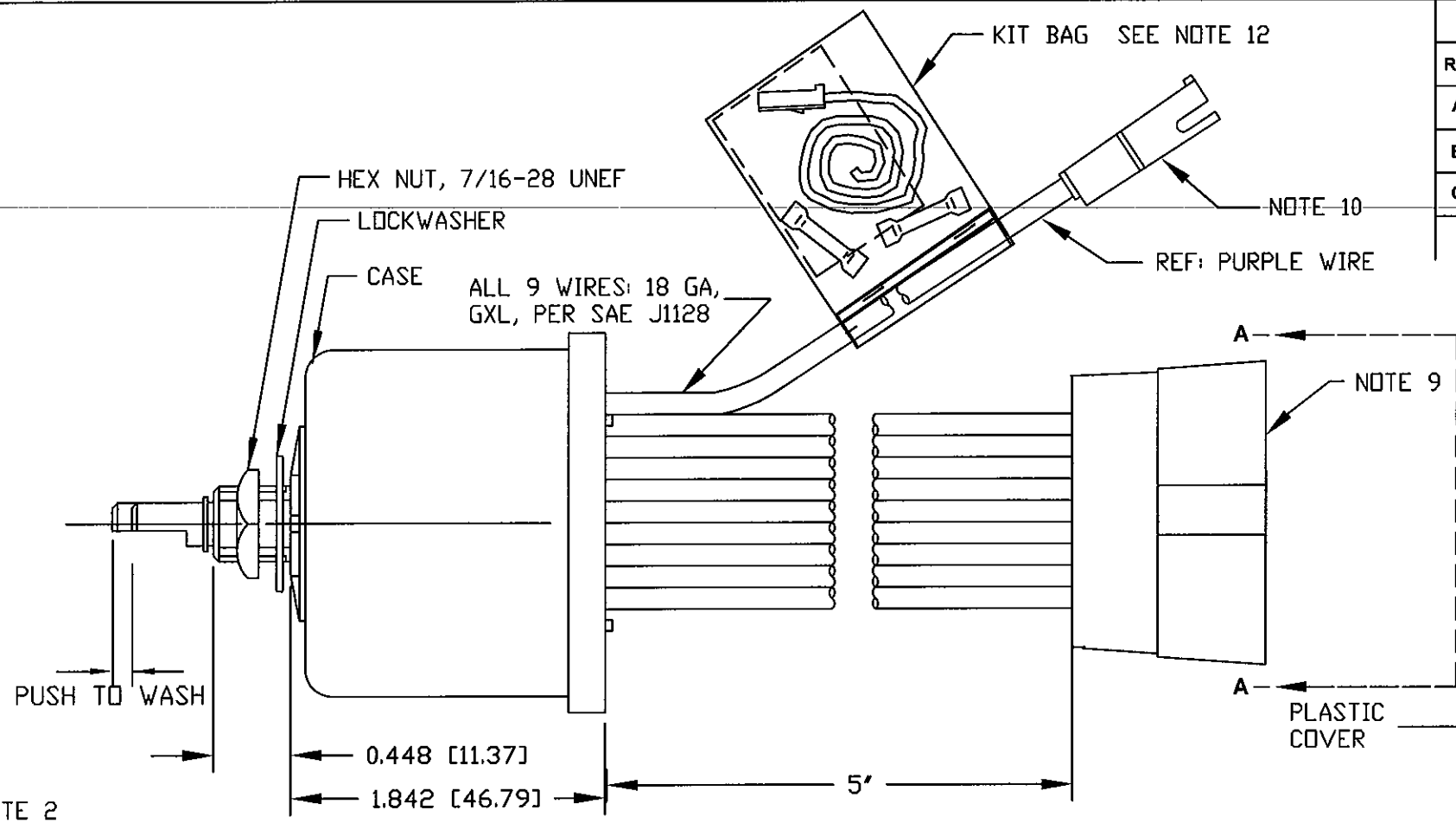
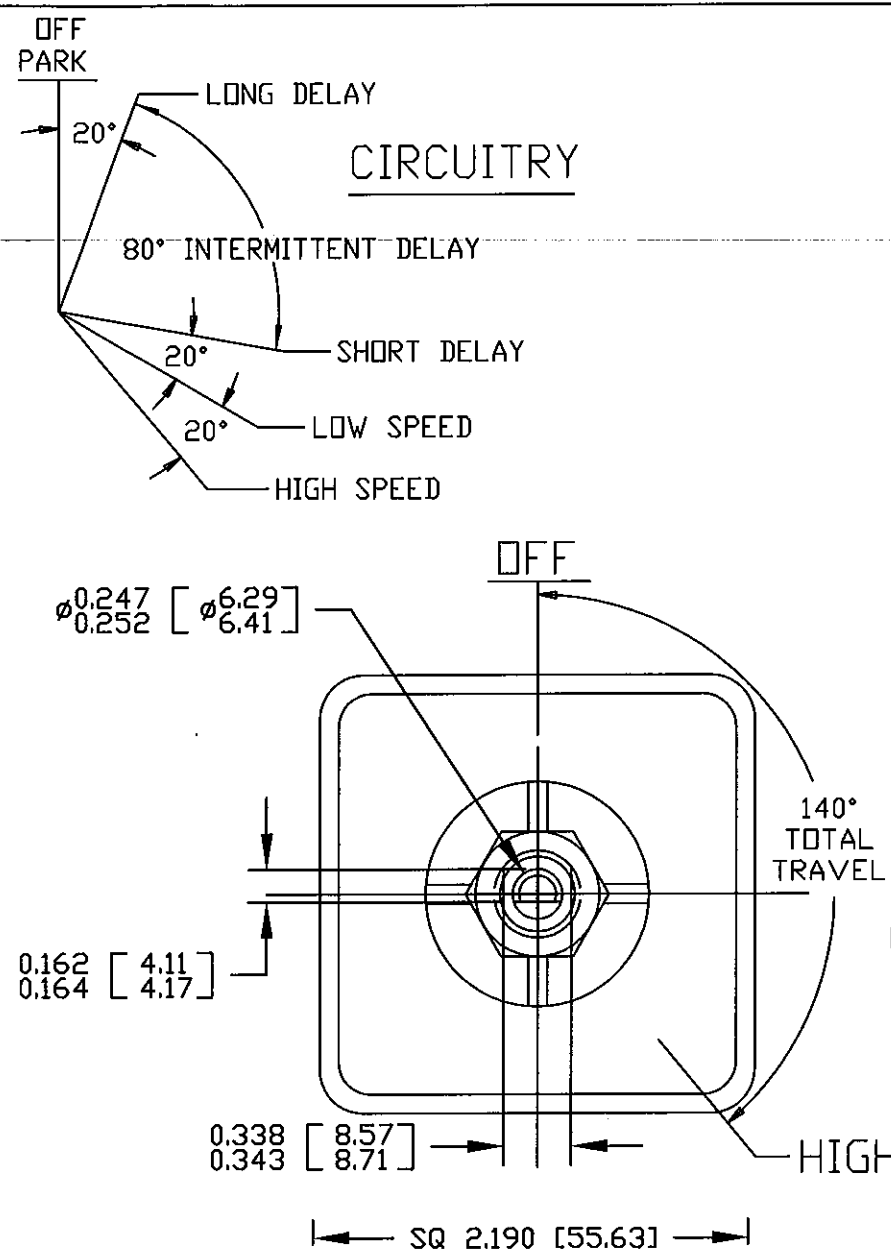
**Cole Hersee Co.**  
 20 Old Colony Ave., South Boston, MA, 02127  
 Phn: 617-268-2100 Web: www.colehersee.com

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

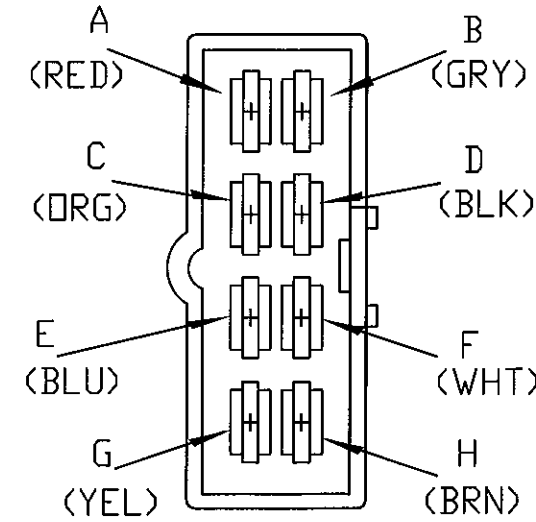
Drawing / Part No.: **75601-14** Current Rev. **C**

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

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.)

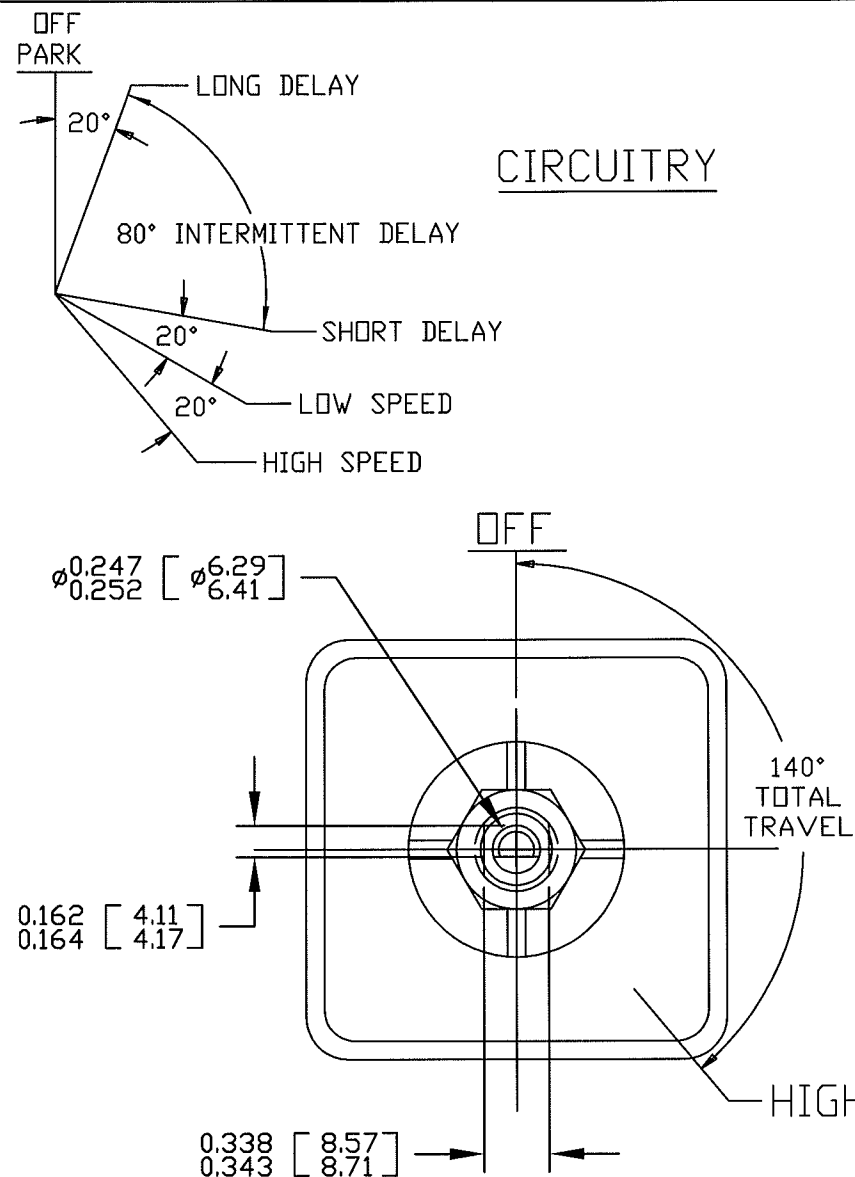
Responsible Engineer: **JCS** Pg. **1**

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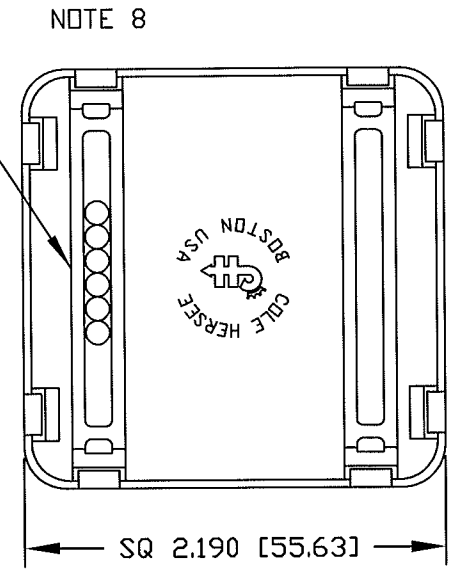
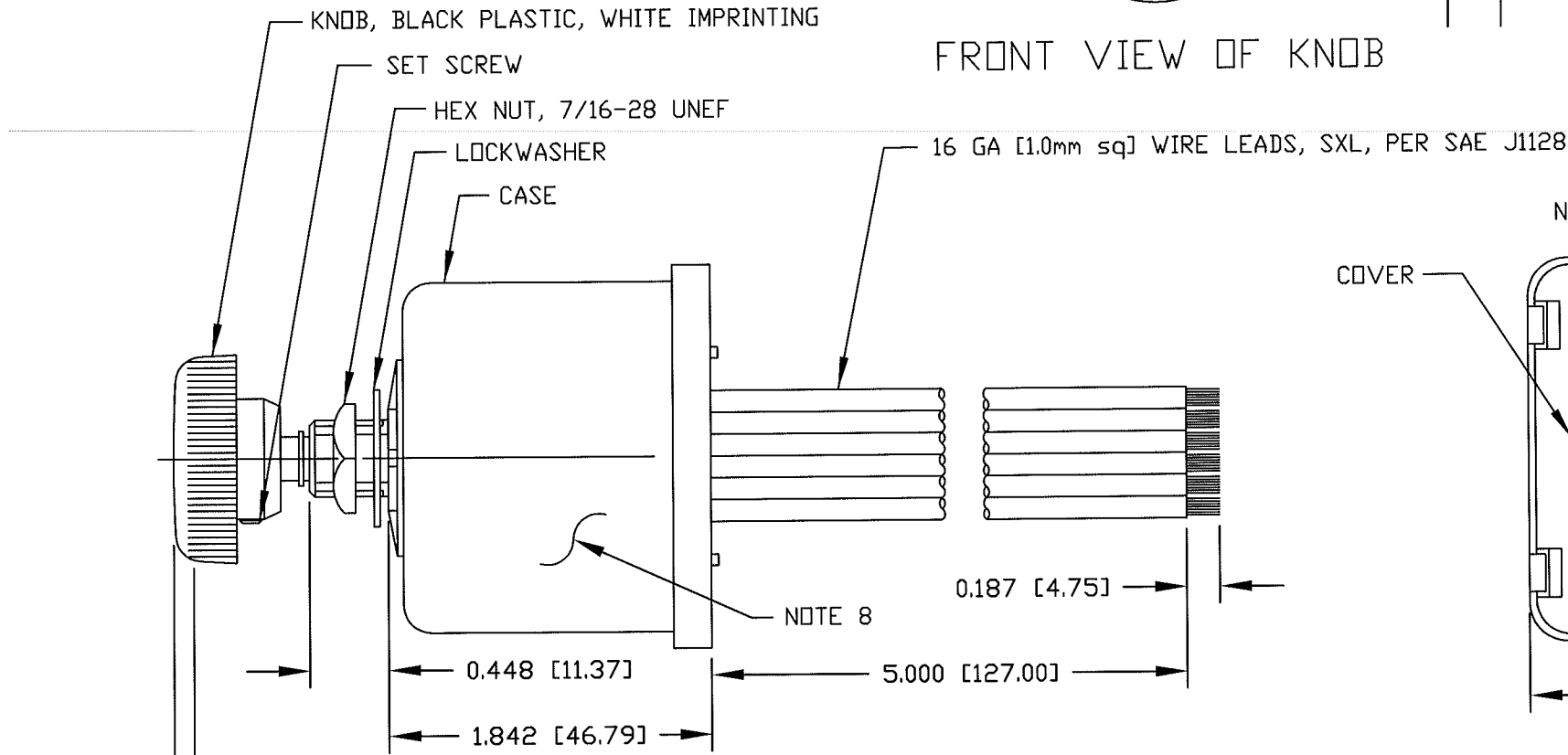
**Description:**  
**WINDSHIELD WIPER CONTROLLER, DUAL-MOTOR, 12V, SSR, NON-DYNAMIC PARK MOTOR**

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

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

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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 оптимального решения, техническое обоснование при выборе компонента;
- 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

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