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MOTORIZED ADJUSTER SURVEY

Asyst Technologies is conducting this survey to gather information for future development of motorized adjusters in automotive headlamps. We are seeking the input of our current and potential customers regarding probable applications and future demand for motorized adjusters. Please take a few minutes to give us your feedback so we can design products to best meet your needs.

I. Background (Circle one answer that best applies)

1. Does your company currently utilize motorized adjusters?
A) Yes
B) No

2. If no, do you plan to use them in the future?
A) Yes, within 3 years
B) Yes, beyond 3 years
C) No
D) Don't know

3. Do you see the demand for motorized adjusters increasing?
A) Yes
B) No
C) Don't know

4. If yes, what % of vehicles do you anticipate will have motorized adjusters within the time period indicated below?
 - Within the next 3 years _____%
 - Within the next 5 years _____%
 - Within the next 10 years _____%

5. Do you feel that motorized adjusters will become standard in the U.S?
A) Yes, within the next 3 years
B) Yes, beyond 3 years
C) No
D) Don't know

6. Do you feel that motorized adjusters will completely replace manual adjusters?
A) Yes, within the next 3 years
B) Yes, beyond 3 years
C) No
D) Don't know

7. What do you expect to pay for motorized adjusters that meet your specifications? \$ _____ EA.

If you currently utilize motorized adjusters, please continue with the survey. If not, please stop here.

II. Technical Information

8. How many headlamps, with manual and motorized adjusters, do you supply annually?
Manual: _____ Units
Motorized: _____ Units



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9. How many headlamps with motorized adjusters do you supply annually for domestic use?
 Domestic vehicles: _____ Units To Whom? _____
10. How many headlamps with motorized adjusters do you supply annually for export use?
 Export vehicles: _____ Units
11. On which type(s) of vehicles do you anticipate motorized adjusters being used? (Circle all that apply)
- A) SUV
 - B) Passenger car
 - C) Truck (Pick-up)
 - D) Truck (Semi trailer)
 - E) Hybrid (Alternate fuel)
 - F) Other _____
12. How do you feel motorized adjusters are likely to be marketed to consumers? (Circle all that apply)
- A) As standard equipment
 - B) As a luxury option
 - C) As a safety option
 - D) Federally mandated
 - E) Other _____

13. How important do you feel each of the following features of a motorized adjuster is?

	Very Important	Important	Somewhat Important	Not Important
Motor features				
Stepper motor base	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DC motor base	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42 Volts compatibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Headlamp adjustment features				
Manual vertical adjustment inside car	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Automatic vertical adjustment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Automatic horizontal adjustment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adjuster features				
Manual adjustment for aiming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Easy to remove and replace in field	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Twist and lock mount (1/4 turn)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Screw mount feature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interchangeable w/ manual adjusters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Package size	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Easy to rework in manufacturing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Miscellaneous features				
Domestic source	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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14. In the table below, please indicate the specifications of motorized adjusters on current product and the ideal specifications for future programs.

Input	Current product	Future programs
Range of total travel required (mm)		
Adjuster controls:		
Vertical aim (yes or no)		
Horizontal aim (yes and no)		
Operating temperature (deg.)		
Holding force (lbf)		
Operating voltage (V)		
Holding torque (in-lb)		
Life expectancy (years)		

15. On your current products, where does the logic come from? (Circle all that apply)

- A) From a central onboard processing unit
- B) From the motorized adjuster
- C) From the suspension system
- D) From the steering system
- E) Other _____

16. On your current products, does the motorized adjuster adjust a reflector or the entire headlamp?

- A) Reflective component
- B) Entire headlamp
- C) Both

17. In case of power failure, do you prefer that the motorized adjuster lock in place or reset in a nominal position?

- A) Lock in place
- B) Reset to a nominal position

18. What additional features would you include in an ideal motorized adjuster?

19. Additional comments:

III. Respondent Profile

Name: _____

Title: _____

Years at Current Employer: _____

Years in forward lighting industry: _____

Years at current position: _____

Interviewer: _____

Date: _____